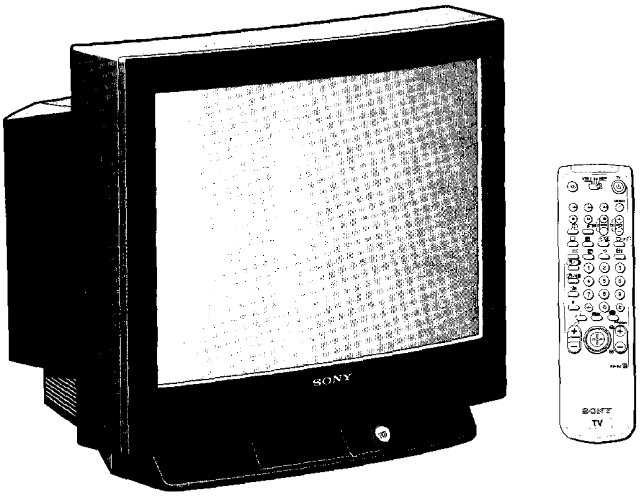
SERVICE MANUAL

BE-3D CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-29F2A	RM-862	Italian	SCC-K05F-A	KV-29F2K	RM-862	OIRT	SCC-K08L-A
KV-29F2B	RM-862	French	SCC-K01F-A	KV-29F2R	RM-862	OIRT	SCC-K08M-A
KV-29F2D	RM-862	AEP	SCC-K07F-A	KV-29F2U	RM-862	UK	SCC-K04D-A
KV-29F2E	RM-862	Spanish	SCC-K06F-A				



MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20, A-H, H1,H2 UHF: E21-E69	PAL NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R20 UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
UK	I	UHF: U21-U69	PAL NTSC3.58/4.43 (video input only)

MODEL	29F2A	29F2B	29F2D	29F2E	29F2K 29F2R	29F2U
Power Consumption	91W	117W	117W	117W	117W	184W

SPECIFICATIONS

Picture Tube	Super Trinitron Approx. 72 cm (29 inches) (Approx. 68 cm picture measured diagonally) 110° -deflection

Rear/Front Terminals

[REAR]

→⊡ 1 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for RGB
- Outputs for TV audio and video signals

⊡→ 2/ →Ⓢ 2, 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for S video
- Outputs for TV audio and video signals (selectable)

→⊙ audio outputs - phono jacks
Left/Right Speaker Terminals
Surround Speaker Terminals

[FRONT]

→⊡ 3 , Video input - phono jack
→⊙ 3 , Audio inputs - phono jacks
→Ⓢ 3 , S video input - 4 pin DIN
🎧 Stereo minijack - headphone jack

Sound output	
Left/Right	2x10W (RMS) 2x20W (music power)
Centre	2x2.5W (RMS) 2x5W (music power)
Surround	2x5W (RMS) 2x10W (music power)
Dimensions	663x617x540 mm approx.
Weight	Approx. 44.0 kg (with speakers)

Supplied accessories
- RM-862 Remote Commander (1)
- Batteries R6 (2)
- Left Speaker (1)
- Right Speaker (1)
- Surround Speakers (2)
- Surround Speakers Leads (2)

Other features	Fastext, NICAM Dolby Pro Logic

[RM-862]

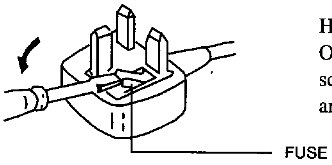
Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x56x24 mm (w/h/d)
Weight	Approx. 110g (Not including battery)

Design and specifications are subject to change without notice.

Model name Item	KV-29F2A	KV-29F2B	KV-29F2D	KV-29F2E	KV-29F2K KV-29F2R	KV-29F2U
PIP	OFF	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON	ON	ON
VM Set	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	ON
Norm D/K	OFF	ON	ON	ON	ON	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	English

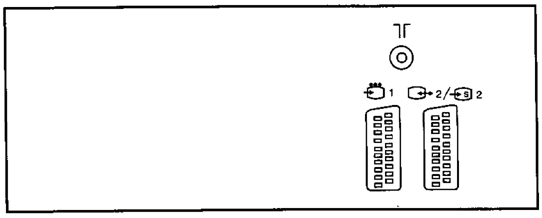
WARNING (KV-29F2U only)

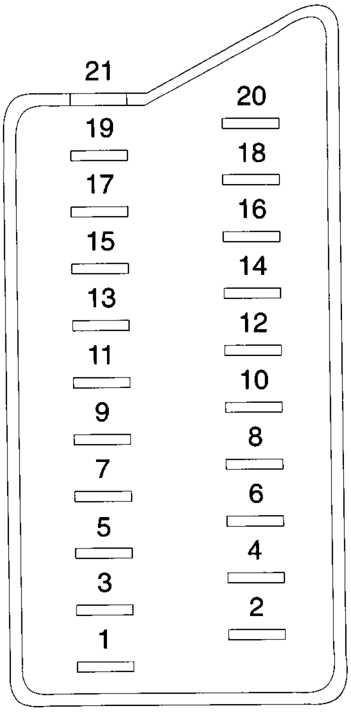
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ASTA mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.
IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.
THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade
and replace the fuse.

21 pin connector (1, 2 / 2)

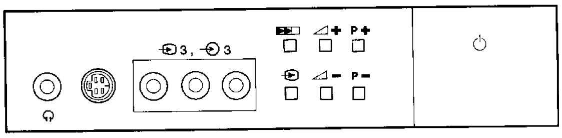




Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) croma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	—	—	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.



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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

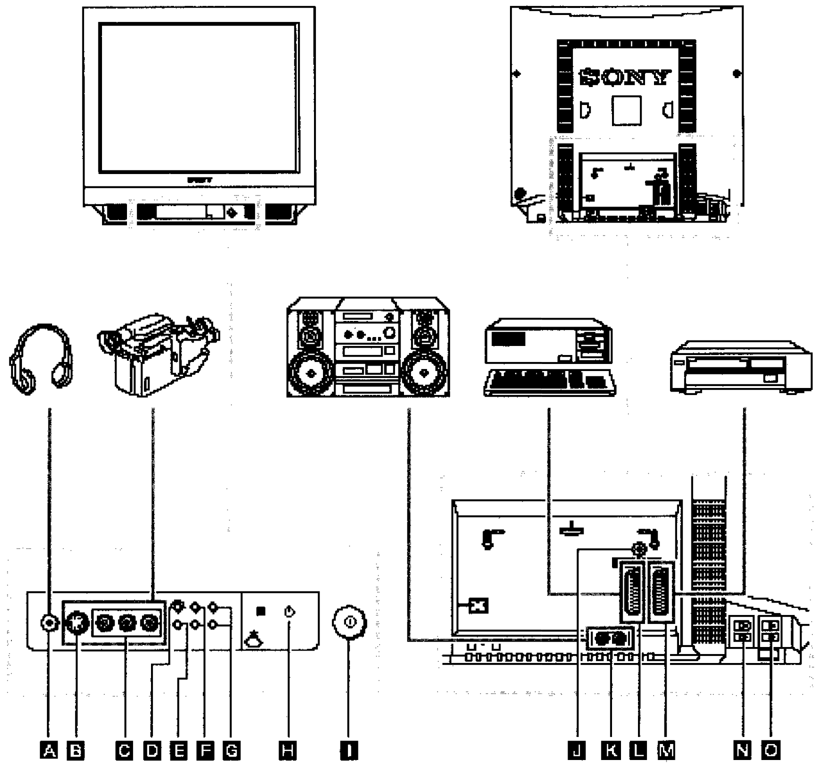
AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



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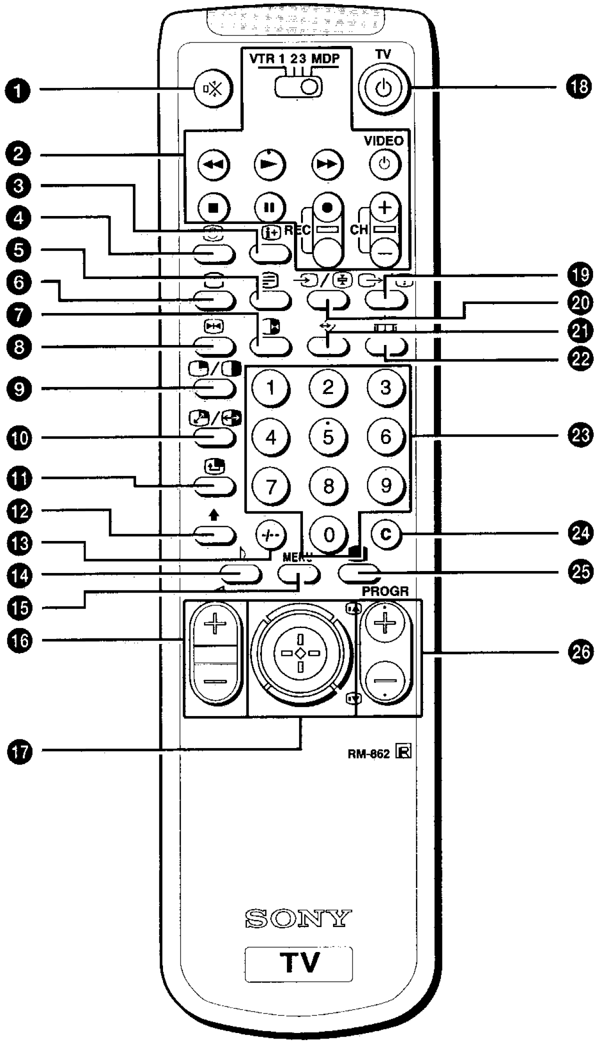

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㉖
VTR 1 23 MDP
TV
VIDEO
REC
CH
MENU
PROGR
RM-862
SONY
TV

Overview

This section briefly describes the controls and the buttons on the TV set and on the Remote Commander. Please open the flap at the front of the Instruction manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

TV buttons and Terminals

Reference and Symbol	Name	Refer to Page
Front of the set		
A ∩	Headphones jack	4
B ⇥3	S video input jack	33
C ⇥3, ⇥3	Audio/video input jacks	33
D ▶▶□	Automatic Preset button	12
E ⇥	Input mode button	14
F ◿ +/-	Volume control	13
G P +/-	Programme button	13
H ⏻	Standby mode indicator	13
I ①	Main power switch	13
Rear of the set		
J ⫪	Aerial socket	11
K ⇨	Audio phono jacks	33
L ⇥1	21 pin Euro connector	33
M ⇨2/⇥2	21 pin Euro connector	33
N L/G/S/I, R/D/D/D	Left/Right speaker terminals (KV-25F2U, 29F2U only)	10
O S	Surround speaker terminals (KV-25F2U, 29F2U only)	10

Remote Commander Operation

Reference and Symbol	Name	Refer to Page
① 🔇	Muting on/off button	13
②	**VCR operation**	36
VTR123MDP	Video equipment selector	
◀◀ ▶ ▶▶ ■ ❚❚ ●	Video equipment operation buttons	
VIDEO ⏻, CH +/-		
③ ⊡	On-screen display button	13
④ ◎	Time display button	13
⑤ ⊜	Teletext button	14
⑥ ▢	TV power on/TV mode button	13, 14
⑦⑧⑨⑩⑪⑫	No function on this set	-
⑬ -/--	Double digit entering button	13
⑭ ♪	Sound mode button	20
⑮ MENU	Menu on/off button	15
⑯ ◿ +/-	Volume control button	13
⑰ ⊕	Joystick for menu selection. Press to confirm selection (OK function)	15
⑱ TV⏻	TV standby button	13
⑲ ?	Teletext: reveal button	31
⑳ ⇥/⊛	Input mode button Teletext: Freezing the subpage	14, 31
㉑ ⇔	Teletext: Favourite pages button	32
㉒ ⊞	Button to change screen format	13
㉓ 1, 2, ... 9, 0	Number buttons	13
㉔ C	Direct channel button	14
㉕ ●	Picture mode button	20
㉖ PROGR +/-	Programme buttons Teletext: Page up/page down buttons	13, 14

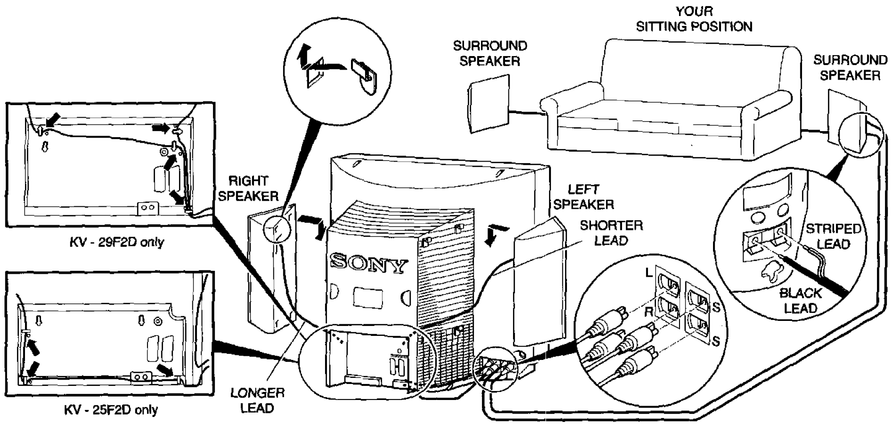
Step 1

Connecting the Speakers

Do not switch on the TV before you connect the speakers.

Dolby (*) Pro Logic Surround normally requires 5 speakers:

Centre speaker (incorporated in the TV set)
- for anchoring the stable sound image, like dialogue, to the TV screen
Left and Right front speakers
- for the normal two channel stereo or bilingual broadcasts
Surround speakers
- for the special effects created by the surround channel


YOUR
SITTING POSITION
SURROUND
SPEAKER
SURROUND
SPEAKER
RIGHT
SPEAKER
LEFT
SPEAKER
SHORTER
LEAD
STRIPED
LEAD
BLACK
LEAD
L
R
S
S
SONY
KV - 29F2D only
KV - 25F2D only
LONGER
LEAD

Notes:
- Connect the speakers using the leads provided. The striped lead (+) is for the red terminal of the speaker and the black lead (-) is for the black terminal.
- If you use your own speakers, make sure they are at least 8Ω impedance and are magnetically shielded. Otherwise picture distortion may occur.
- For your safety, do not hold the speakers when lifting the set.
(*) Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY, the double-D symbol DD and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

Step 2

Connecting the Aerial

(If you connect a VCR, skip to step 3)

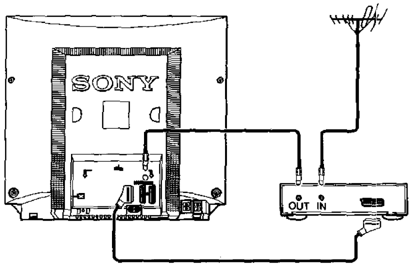
Insert the aerial plug tightly into the aerial socket ⅂Γ **J**. Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

Step 3

Connecting a VCR

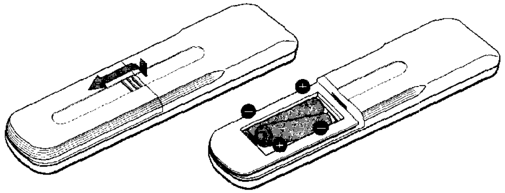
We recommend that you tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 17.

See "Connecting Optional Equipment" on page 33 for more information.



Step 4

Inserting the Batteries Into the Remote Commander



Respect your environment! Dispose of used batteries in an environmentally friendly way.

Step 5

Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers.

If you prefer manual presetting, refer to "Presetting Channels Manually" on page 17.

1 Plug into mains.
Press the power switch ⏽ 🅸 on the TV set.

2 Press and hold the button ⏭▢ 🅳 on the TV set until the automatic menu is displayed and the search starts.

After all available channels are stored, the normal TV picture is shown.

Note: Channels are automatically stored as follows:

Programme 1	BBC1
Programme 2	BBC2
Programme 3	ITV
Programme 4	CH4 or S4C

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flap at the front of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

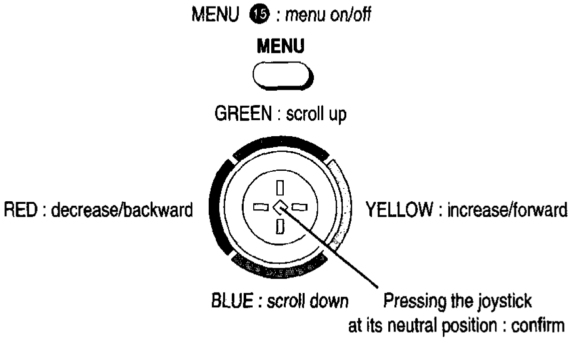
To	Press
Switch on	⏽ 🅸 on TV
Switch off temporarily	⏻ ⓲ TV is now in standby mode and ⏻ 🅷 indicator on TV lights up.
Switch on from standby mode	▢ ❻, PROGR +/- ㉖ 🅶 or any number button ㉓
Switch off completely	⏽ 🅸 on TV To save energy, switch off your TV completely when TV is not in use.
Select programmes	PROGR +/- ㉖ 🅶 or number buttons ㉓ For double digit number, press -/-- ⓭ then the number e.g. For 23, press -/-- ⓭ then 2 and 3.
Display on screen indications	ⓘ ❸. Press again to make the indications disappear.
Adjust the volume	◿ + or - ⓰ 🅵
Mute the sound	🔇 ❶. Press again to restore the sound.
Display the time (only available when teletext is broadcast)	◷ ❹. Press again to make the display disappear.
View programmes in 16:9 mode	⊞ ㉒. Press again to return to 4:3 mode.

TV Operation (continued)

To	Press
Tune in a channel temporarily	C ㉔. The indication "C" appears. Enter the double digit number. e.g. For 4, press 0 then 4.
View video input picture (see page 34 for detailed information)	⇥ ⓴ 🅴 repeatedly until the desired video input appears. Press ▢ ❻ to restore the TV picture.
View teletext (see page 31 for detailed information)	
Switch on	≣ ❺
Select a page	three number buttons ㉓ or ≣▲ ㉖ (for next page) or ≣▼ ㉖ (for previous page).
Use fastext	Push joystick ⓱ to select a colour.
Switch off	▢ ❻

Adjusting and Setting the TV Using the Menu

You can adjust and set various functions on the TV using the following remote commander buttons:

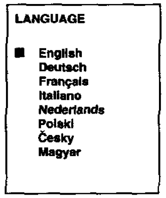

MENU ⓯ : menu on/off
MENU
GREEN : scroll up
RED : decrease/backward
YELLOW : increase/forward
BLUE : scroll down
Pressing the joystick at its neutral position : confirm

Choosing the Menu Language

This function enables you to change the language of the menu screens.

1 Press power switch Ⓘ 🅸 on the TV. If the standby indicator ⏻ 🅷 on the TV is lit, press ▢ ❻ or a number button ㉓ on the Remote Commander.

2 Press the MENU button ⓯ on the remote commander.


LANGUAGE
■ English
Deutsch
Français
Italiano
Nederlands
Polski
Česky
Magyar

3 Push to blue or green to select the language you want then push to yellow.

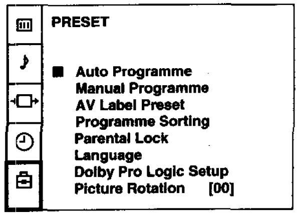
4 Press the MENU button ⓯ to restore the normal TV picture.

Presetting Channels Automatically

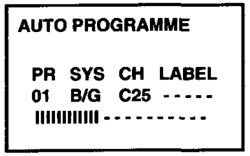
You may have already preset the channels automatically by using the method shown on page 12. You can also preset channels automatically by using the remote commander as follows:

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.


PRESET
■ Auto Programme
Manual Programme
AV Label Preset
Programme Sorting
Parental Lock
Language
Dolby Pro Logic Setup
Picture Rotation [00]

3 Push to blue or green to select 'Auto Programme'.



```
AUTO PROGRAMME

PR  SYS  CH   LABEL
01  B/G  C25  -----
IIIIIIIIIII----------
```

4 Push to yellow and hold until the automatic menu is displayed and the search starts.
After all available channels have been preset, the normal TV picture is shown.

Note: Channels are automatically stored as follows:

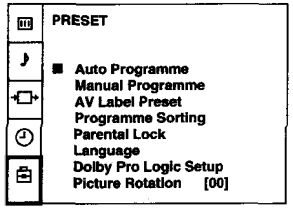
Programme 1	BBC1
Programme 2	BBC2
Programme 3	ITV
Programme 4	CH4 or S4C

Presetting Channels Manually

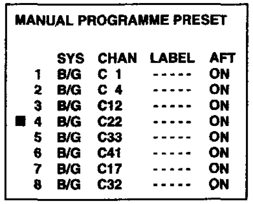
This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.


PRESET
■ Auto Programme
Manual Programme
AV Label Preset
Programme Sorting
Parental Lock
Language
Dolby Pro Logic Setup
Picture Rotation [00]

3 Push to blue or green to select 'Manual Programme' then push to yellow .



```
MANUAL PROGRAMME PRESET

     SYS  CHAN  LABEL  AFT
  1  B/G  C 1   -----  ON
  2  B/G  C 4   -----  ON
  3  B/G  C12   -----  ON
■ 4  B/G  C22   -----  ON
  5  B/G  C33   -----  ON
  6  B/G  C41   -----  ON
  7  B/G  C17   -----  ON
  8  B/G  C32   -----  ON
```

4 *Push to blue or green to select on which programme number you want to preset a* channel then push to yellow.

5 Push to blue or green to select the TV broadcast system (I) or a video input source (AV1, AV2,...) then push to yellow.

6 Select the first number digit of 'CHAN' then the second number digit of 'CHAN' with the number buttons ㉓ on the remote commander
or
Push joystick ⓱ to blue or green to search for the next available channel number.

7 If you want to store the channel number, go to step 8. If not, select a new channel number using the number buttons ㉓ on the remote commander or push to blue or green to resume the search.

8 Press the joystick ⑰.

9 Repeat steps 4 to 8 to preset other channels.

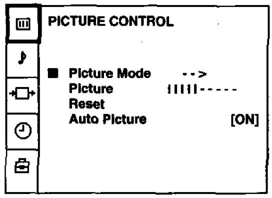
10 Press the MENU button ⑮ to restore the normal TV picture.

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

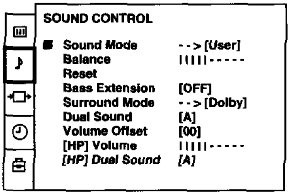
1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select ▥ for picture control or ♪ for sound control then push to yellow.



PICTURE CONTROL

■ Picture Mode -->
Picture IIIII-----
Reset
Auto Picture [ON]



SOUND CONTROL

■ Sound Mode -->[User]
Balance IIIII-----
Reset
Bass Extension [OFF]
Surround Mode -->[Dolby]
Dual Sound [A]
Volume Offset [00]
[HP] Volume IIIII-----
[HP] Dual Sound [A]

3 Push to blue or green to select the desired item then push to yellow.

4 Push to red or yellow to alter the item then press the joystick ⑰.
For the effect of each control, see the following tables.

5 Repeat steps 3 and 4 *to adjust the other items.*

6 Press the MENU button ⑮ to restore the normal TV picture.

PICTURE CONTROL	**Effect**
Picture Mode	User —> Game —> Movie —> Sports —> Live In 'User' mode, you can preset Brightness, Colour, Sharpness and Hue (NTSC signals only) as follows: **1** Push joystick ⑰ to blue or green to select the desired item then push to yellow. **2** Push to red or yellow to adjust then press the joystick ⑰. **3** Push to red to return to the PICTURE CONTROL menu.
Contrast	Darker ——I—— Brighter
Reset	Resets picture to the factory preset levels.
Auto Picture	*All the picture levels automatically change according to* the surrounding lighting level. (Auto Picture Control)
Format	Wide screen effect (16:9)

SOUND CONTROL	Effect
Sound Mode	User —> Rock —> Jazz —> Pop In 'User' mode, you can preset Treble and Bass as follows. 1 Push joystick ⓱ to blue or green to select the item then push to yellow. 2 Push to red or yellow to adjust then press the joystick ⓱. 3 Push to red to return to the 'SOUND CONTROL' menu.
Balance	Left —— I —— Right
Reset	Resets sound to the factory preset levels.
Bass Extension	Boosts bass by a fixed amount.
Surround Mode	Choice among special sound effects. Pro Logic —> Pseudo Stereo —> Spatial —> Club —> Theatre—> Hall —> Church —> Stadium —> Off
Dual Sound	A: Left channel —> B: Right channel —> stereo —> mono
Volume Offset	Presets the volume level for individual programmes. -12 —— 0 —— +12
∩ Volume	Adjusts the headphone volume.
∩ Dual Sound	Presets the headphone channels. A: Left channel —> B: Right channel —> stereo —> mono

Changing Modes Quickly

You can quickly change the Surround Mode or the Picture Mode without entering the 'SOUND CONTROL' or the 'PICTURE CONTROL' menu.

1 Press ■ ㉕ for the picture or ♪ ⓮ for the sound.

2 Push joystick ⓱ to blue or green to select the desired mode then push to yellow.

3 Press ■ ㉕ or ♪ ⓮ again to restore the normal TV screen.

Manual Fine-Tuning

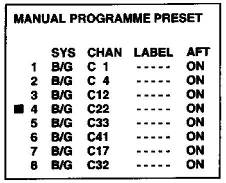
Normally, the automatic fine-tuning (AFT) function is operating.

If the picture is distorted however, you can manually fine-tune the TV to obtain a better picture reception.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

3 Push to blue or green to select 'Manual Programme' then push to yellow.



MANUAL PROGRAMME PRESET

		SYS	CHAN	LABEL	AFT
	1	B/G	C 1	-----	ON
	2	B/G	C 4	-----	ON
	3	B/G	C12	-----	ON
■	4	B/G	C22	-----	ON
	5	B/G	C33	-----	ON
	6	B/G	C41	-----	ON
	7	B/G	C17	-----	ON
	8	B/G	C32	-----	ON

4 Push to blue or green to select the programme number which corresponds to the channel you want to manually fine-tune.

5 Push to yellow repeatedly until the AFT position changes colour..

6 Push to blue or green to change the frequency of the channel from -15 to +15.

7 Press the joystick ⓱.

8 Repeat steps 4 to 7 to fine-tune other channels.

9 Press the MENU button ⓯ to restore the normal TV picture.

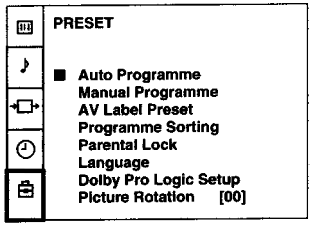
Sorting Programme Positions

This function enables you to move channels to different programme numbers.

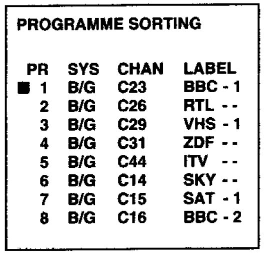
1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

3 Push to blue or green to select 'Programme Sorting' then push to yellow .


PRESET
■ Auto Programme
Manual Programme
AV Label Preset
Programme Sorting
Parental Lock
Language
Dolby Pro Logic Setup
Picture Rotation [00]

4 Push to blue or green to select the channel you want to move to another programme number then push to yellow.



PROGRAMME SORTING

PR	SYS	CHAN	LABEL
■ 1	B/G	C23	BBC - 1
2	B/G	C26	RTL - -
3	B/G	C29	VHS - 1
4	B/G	C31	ZDF - -
5	B/G	C44	ITV - -
6	B/G	C14	SKY - -
7	B/G	C15	SAT - 1
8	B/G	C16	BBC - 2

5 Push to blue or green to select the programme number to which you want to move the channel selected in step 4 then push to yellow.

6 Repeat steps 4 to 5 if you wish to move other channels to different programme numbers.

7 Press the MENU button ⑮ to restore the normal TV picture.

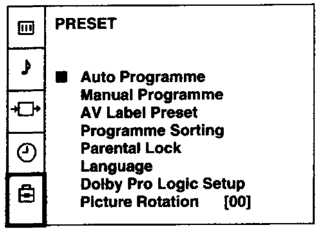
Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

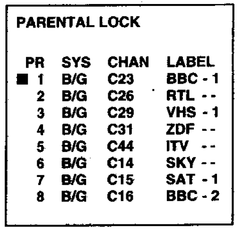
1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

3 Push to blue or green to select 'Parental Lock' then push to yellow.


PRESET
■ Auto Programme
Manual Programme
AV Label Preset
Programme Sorting
Parental Lock
Language
Dolby Pro Logic Setup
Picture Rotation [00]

4 Push to blue or green to select the channel you want to block then push to yellow.
The symbol appears before the programme number to indicate that this channel is now blocked.



PARENTAL LOCK

PR	SYS	CHAN	LABEL
■ 1	B/G	C23	BBC - 1
2	B/G	C26	RTL - -
3	B/G	C29	VHS - 1
4	B/G	C31	ZDF - -
5	B/G	C44	ITV - -
6	B/G	C14	SKY - -
7	B/G	C15	SAT - 1
8	B/G	C16	BBC - 2

5 Repeat step 4 if you wish to block other channels.

6 Press the MENU button ⑮ to restore the normal TV picture.

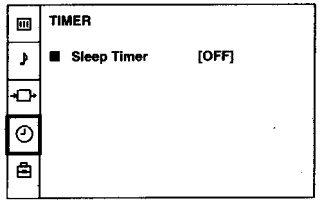
Note: To unblock, push to yellow after selecting the channel to unblock in the 'Parental Lock' menu.

Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ◷ on the menu screen then push to yellow.



TIMER

■ Sleep Timer [OFF]

3 Push to yellow.

4 Push to red or yellow to set time delay and press the joystick ⓱.

OFF 0:30 1:00 1:30 .... 3:30 4:00

One minute before the TV switches into standby mode, a message is displayed on the screen.

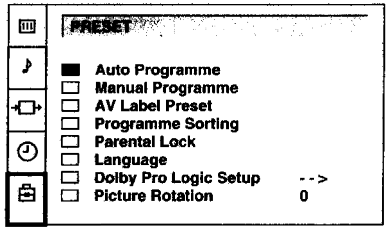
5 Press the MENU button ⓯ to restore the normal TV picture.

Adjusting the Picture Rotation

If, due to the earth magnetism, the picture slants, you can use the function 'Picture Rotation' to readjust the picture.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.



PRESET

■ Auto Programme
☐ Manual Programme
☐ AV Label Preset
☐ Programme Sorting
☐ Parental Lock
☐ Language
☐ Dolby Pro Logic Setup -->
☐ Picture Rotation 0

3 Push to blue or green to select 'Picture Rotation' then push to yellow.

4 Push to red or yellow to adjust the picture rotation then press the joystick ⓱. The adjusting range is -5 to +5.

5 Press the MENU button ⓯ to restore the normal TV picture.

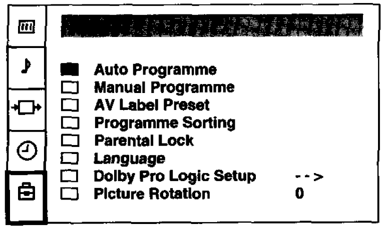
Skipping Programme Positions

This function enables you to skip unused programme positions when selecting them with the PROGR+/- buttons. However, you can still watch the channel of the skipped programme position by using the number buttons.

1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

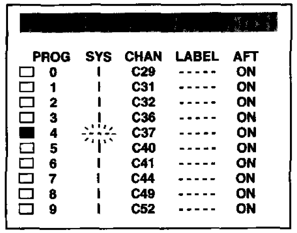
3 Push to blue or green to select 'Manual Programme' then push to yellow.



■ Auto Programme
☐ Manual Programme
☐ AV Label Preset
☐ Programme Sorting
☐ Parental Lock
☐ Language
☐ Dolby Pro Logic Setup -->
☐ Picture Rotation 0

4 *Push to blue or green to select the programme position you want to skip then* push to yellow.

5 Push to blue or green until *'- - -' appears in the 'SYS' position.*



	PROG	SYS	CHAN	LABEL	AFT
☐	0	I	C29	-----	ON
☐	1	I	C31	-----	ON
☐	2	I	C32	-----	ON
☐	3	I	C36	-----	ON
■	4	- - -	C37	-----	ON
☐	5	I	C40	-----	ON
☐	6	I	C41	-----	ON
☐	7	I	C44	-----	ON
☐	8	I	C49	-----	ON
☐	9	I	C52	-----	ON

6 Press the joystick ⑰.

7 Repeat steps 4 to 6 to skip other programme positions.

8 Press the MENU button ⑮ to restore the normal TV picture.

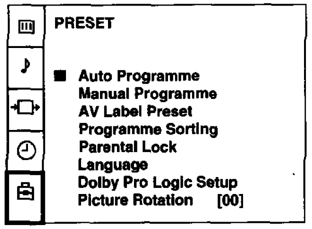
Captioning a Station Name

Names for channels are usually automatically taken from teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).

1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

3 Push to blue or green to select 'Manual Programme' then push to yellow.

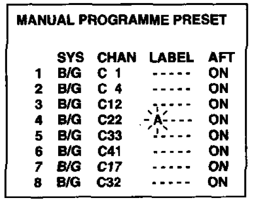


PRESET

■ Auto Programme
Manual Programme
AV Label Preset
Programme Sorting
Parental Lock
Language
Dolby Pro Logic Setup
Picture Rotation [00]

4 *Push to blue or green to select the channel you wish to caption then push to* yellow repeatedly until the first element of the 'LABEL' position is highlighted.

5 Push to blue or green to select *a letter or number and push to* yellow (select '-' for a blank). Select other characters in the same way.



MANUAL PROGRAMME PRESET

	SYS	CHAN	LABEL	AFT
1	B/G	C 1	-----	ON
2	B/G	C 4	-----	ON
3	B/G	C12	-----	ON
4	B/G	C22	A----	ON
5	B/G	C33	-----	ON
6	B/G	C41	-----	ON
7	B/G	C17	-----	ON
8	B/G	C32	-----	ON

6 After selecting all the characters, press the joystick ⑰.

7 Repeat steps 4 to 6 to caption names for other channels.

8 Press the MENU button ⑮ to restore the normal TV screen.

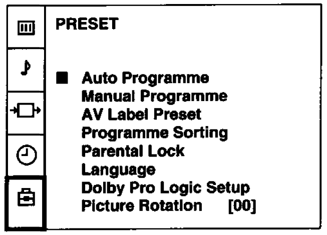
Setting Up Dolby Pro Logic

Before viewing Dolby Pro Logic encoded programmes, you have to set up the levels or modes of the speakers.
Normally this is required only when you install the TV and the speakers or change their positions.

1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

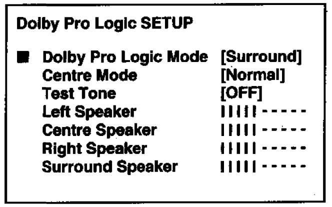
3 Push to blue or green to select 'Dolby Pro Logic Setup' then push to yellow.



PRESET

- Auto Programme
- Manual Programme
- AV Label Preset
- Programme Sorting
- Parental Lock
- Language
- Dolby Pro Logic Setup
- Picture Rotation [00]

4 Push to blue or green to select 'Mode' then push to yellow.



Dolby Pro Logic SETUP

■ Dolby Pro Logic Mode	[Surround]
Centre Mode	[Normal]
Test Tone	[OFF]
Left Speaker	IIIII-----
Centre Speaker	IIIII-----
Right Speaker	IIIII-----
Surround Speaker	IIIII-----

5 Push to blue or green to select the mode then press the joystick ⑰.
Dolby Pro Logic: if you want to use all the five speakers
Dolby 3 Stereo: if you do not want to use the surround speakers

6 Push to blue or green to select 'Centre Mode' then push to yellow.

7 Push to blue or green to select the desired mode then press the joystick ⑰.
Normal: if you want to activate all the speakers
Wide: if you want a wider bandwidth sound effect
Phantom: if you do not want to use the centre speaker

8 Push to blue or green to select 'Test Tone' then push to yellow.

9 Push to blue or green to select 'On' then press the joystick ⑰.
The test tone cycles through all the speakers.

10 Push to blue to select 'Left Speaker' then push to yellow.
The test tone stays at the selected speaker only.

11 Push to red or yellow to adjust the sound level then press the joystick ⑰.

12 Push to blue or green to select another speaker then push to yellow.

13 Repeat steps 11 to 12 to adjust the sound levels of all the speakers.

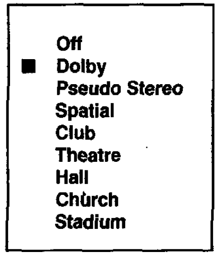
14 Press the MENU button ⑮ to restore the normal TV screen.

Presetting Dolby Pro Logic

With Dolby Pro Logic Surround mode selected, you can experience three dimensional sound when watching Dolby Surround encoded programmes.
To experience programmes encoded in Dolby Surround sound, preset the surround mode to 'Dolby' as shown below.

1 Press ♪ ⓮ on the remote commander.

2 Push joystick ⓱ to blue or green
to select 'Pro Logic' then push to yellow.



Off
■ **Dolby**
Pseudo Stereo
Spatial
Club
Theatre
Hall
Church
Stadium

3 Press ♪ ⓮ to restore the normal TV screen.

Or alternatively you can select 'Pro Logic' in the surround mode of the 'SOUND CONTROL' menu (see page 19)

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) gives you information on how to use the service.
Make sure you use a TV channel with a strong signal, otherwise teletext errors may occur.

Switching Teletext on and off

1 Select the channel which carries the teletext service you wish to view.

2 Press ⊜ ❺ to display teletext.
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

3 Input three digits for the page number using the number buttons ㉓.
The page counter searches for the page and after some seconds the page is displayed.

4 Press ▢ ❻ to return to the normal TV picture.

Using Other Teletext Functions

To	**Press**
Access the next or preceding teletext page	⊜▲ ㉖ for the next page or ⊜▼ ㉖ for the preceding page
Mix the mode	⊜ ❺ when in teletext mode. Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display.
Freeze a teletext subpage	⊕ ⓴. Press once again to cancel.
Reveal hidden information (eg: answers to a quiz)	? ⓳. Press once again to cancel.

Favourite page system

You can store up to four of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

Storing pages

1 Use the number buttons ㉓ to select the page you would like to store.

2 Press ⇔ ㉑ twice.
The colour prompts at the bottom of the screen flash.

3 Push the joystick ⑰ to store the selected page.
The page is now stored on this colour.

Repeat steps 1 to 3 for the other 3 pages.

Displaying the Favourite Pages

1 Press ⇔ ㉑.

2 Push the joystick ⑰ to the colour on which the desired page is stored.

Make sure you press ⇔ ㉑, otherwise the normal Fastext facility operates.

Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke . When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue marks on the Remote Commander.

Push the joystick ⑰ to the colour mark which corresponds to the colour-coded menu. The page is displayed after some seconds.

Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the front flap page of this manual.

Symbol	Acceptable input signals	Available output signals
1 L	Normal audio/video and RGB	Audio/video from TV tuner
2/ 2 M	Normal audio/video and S video	Audio/video from selected source
3, 3 B 3 C	Normal audio/video and S video	No output
K	No inputs	Audio from selected source.

About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

Notes on connections:

If the picture or sound is distorted, move the VCR away from the TV.

When connecting a monaural VCR, connect only the white jack to both the TV and VCR.

Selecting Input and Output Signals

This section explains how to view the video input picture and how to select the output signal. You can use direct access buttons ⇥ ⑳ 🅴 to select the input or the menu system to select input and output.

Selecting With Direct Access Buttons

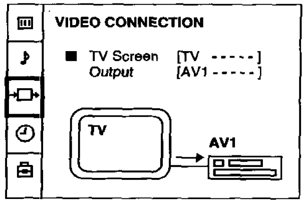
Press ⇥ ⑳ 🅴 repeatedly .
Press ▢ ⑥ to restore the normal TV picture.

Symbol on the screen	Input Signal
⇥1	Audio / video through Euro AV connector 🅻
⇥⃛	RGB through Euro AV connector 🅻
⇥2	Audio / video through Euro AV connector 🅼
⇥Ⓢ 2	S video through Euro AV connector 🅼
⇥3	Audio / video through the phono jacks 🅲
⇥Ⓢ 3	S video through the phono jacks 🅱

Selecting With the Video Connection Menu

1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select ⇥▢↦ for "Video Connection" then push to yellow.



VIDEO CONNECTION
■ TV Screen [TV -----]
Output [AV1 -----]

3 Push to blue or green to select input or output then push to yellow ⑰.

4 Push to blue or green repeatedly to select the desired input or output source then press the joystick ⑰.

5 Press the MENU button ⑮ to restore the normal TV picture.

Note: If you select 'Auto' for output, the output source automatically becomes the same as the desired input source.

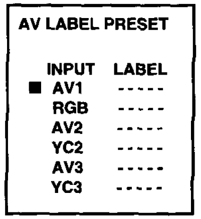
Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select the symbol 🖨 on the screen then push to yellow.

3 Push to blue or green to select 'AV Label Preset' then push to yellow.



AV LABEL PRESET

INPUT	LABEL
■ AV1	-----
RGB	-----
AV2	-----
YC2	-----
AV3	-----
YC3	-----

4 Push to blue or green to select the desired input source then push to yellow.

5 Push to blue or green to select a letter or number then push to yellow (select '-' for a blank).
Select other characters in the same way.

6 After selecting all the characters, press the joystick ⑰.

7 Repeat steps 4 to 6 label other input sources.

8 Press the MENU button ⑮ to restore the normal TV screen.

Remote Control of Other Sony Equipment

You can control other Sony remote controlled equipment using the buttons ❷ on the Remote Commander.

1 Set the VTR 1/2/3 MDP selector according to the equipment

VTR 1: Beta VCR	VTR 2: 8mm VCR
VTR 3: VHS VCR	MDP: Video Disk Player

2 Use the buttons ❷ to operate the equipment.

Notes:
- If your video equipment has a COMMAND MODE selector, set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander
- If the equipment does not have a certain function, the corresponding button on the Remote Commander does not work.

Troubleshooting

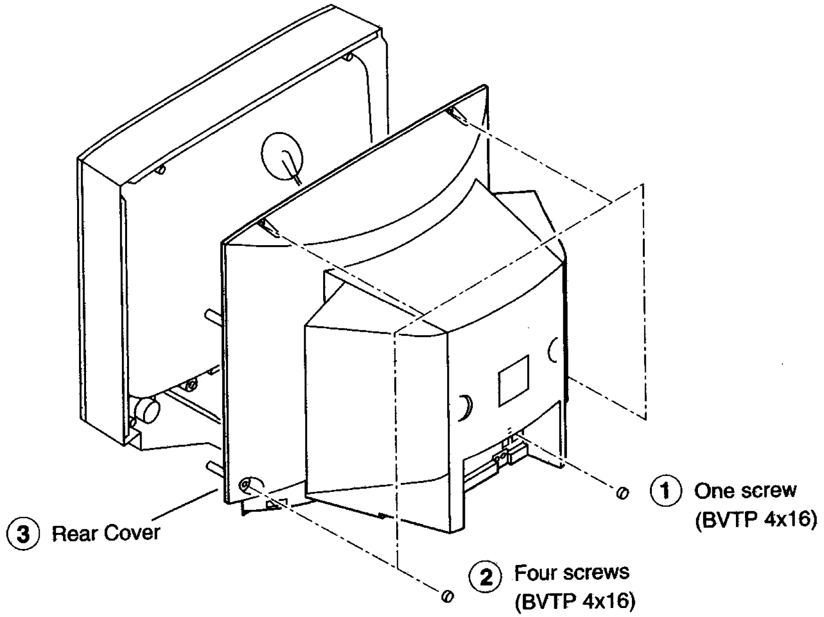
Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	• Plug the TV in. • Press Ⓘ 🅸 on the TV. (If ⏻ indicator 🅷 is on, press ▢ ❻ or a programme number ㉓ on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds then turn it on again using Ⓘ 🅸.
Poor or no picture (screen is dark), but good sound	• Press MENU ⓯ to enter the 'PICTURE CONTROL' menu and adjust 'Picture', 'Brightness' and 'Colour'.
Poor picture quality when watching an RGB video source.	• Press ⇥ ⑳ 🅴 repeatedly to select ⇥.
Good picture but no sound	• Press ◿ + ⓰ 🅵. • If 🔇 is displayed on the screen, press 🔇 ❶.
No colour for colour programmes	• Press MENU ⓯ to enter the 'PICTURE CONTROL' menu, select 'Reset' then press the joystick ⓱.
Remote Commander does not function.	• Replace the batteries

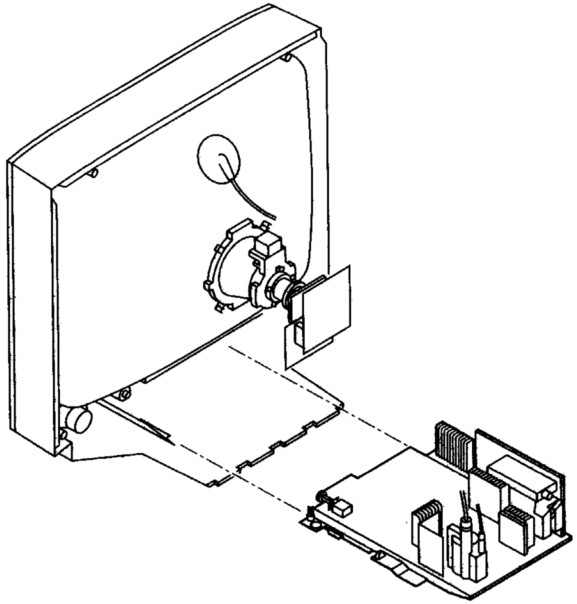
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

SECTION 2
DISASSEMBLY

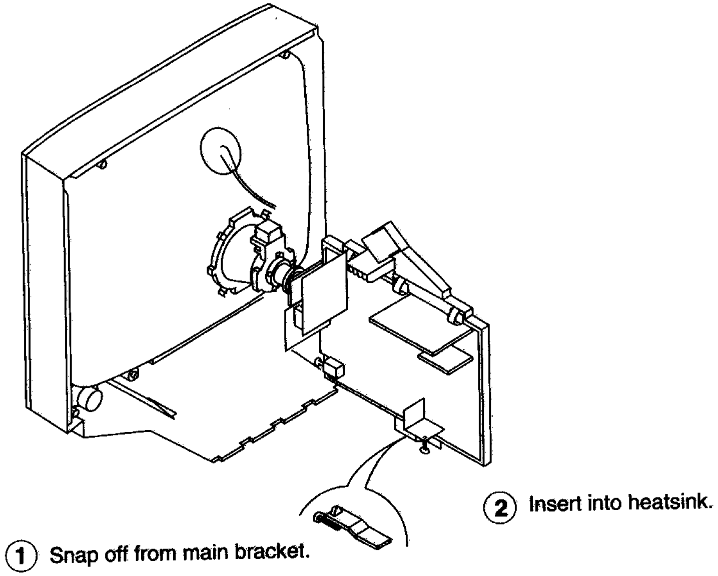
2-1. REAR COVER REMOVAL


① One screw
(BVTP 4x16)
② Four screws
(BVTP 4x16)
③ Rear Cover

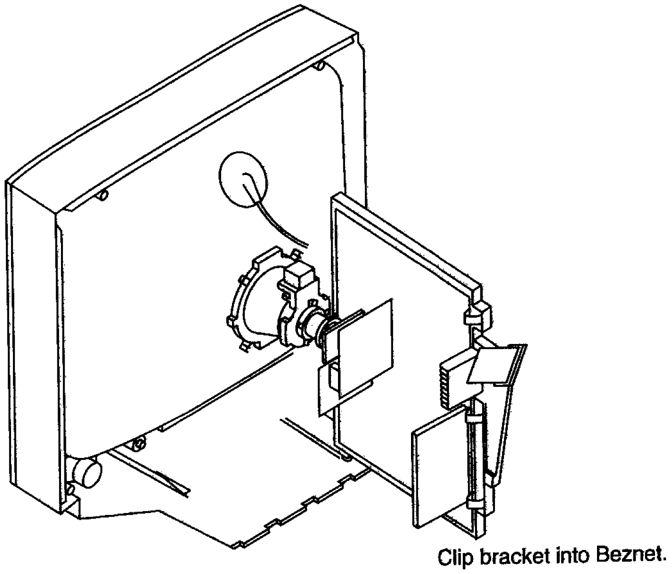
2-2. CHASSIS ASSY REMOVAL



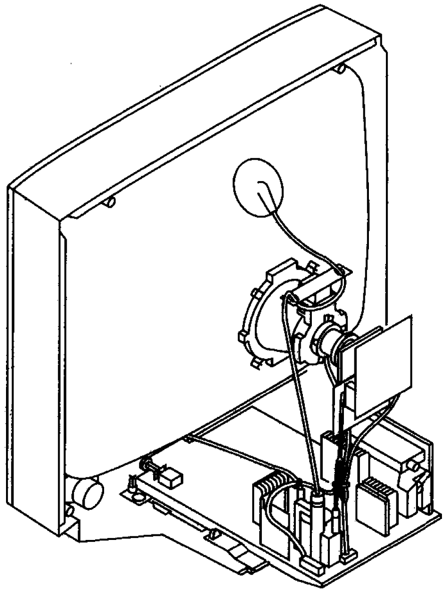
2-3-1. SERVICE POSITION (1)


① Snap off from main bracket.
② Insert into heatsink.

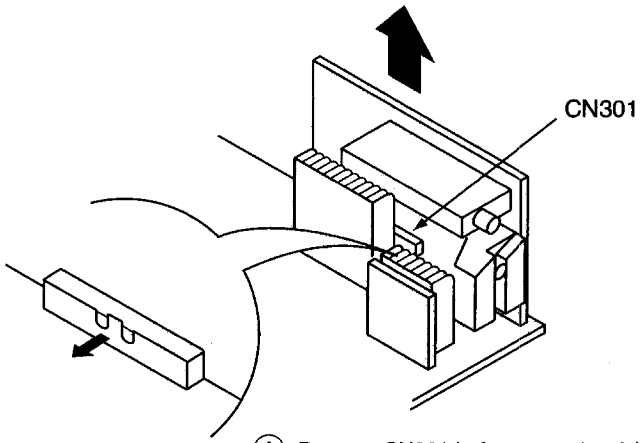
2-3-2. SERIVCE POSITION (2)


Clip bracket into Beznet.

2-4. WIRE DRESSING

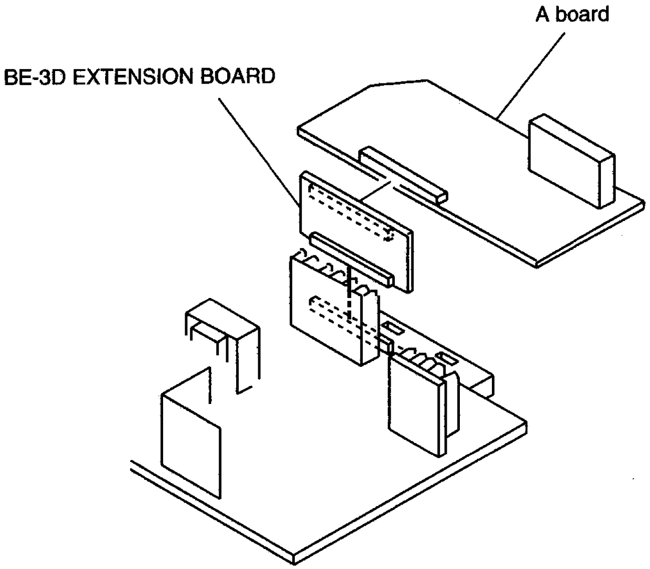


2-5. A BOARD REMOVAL

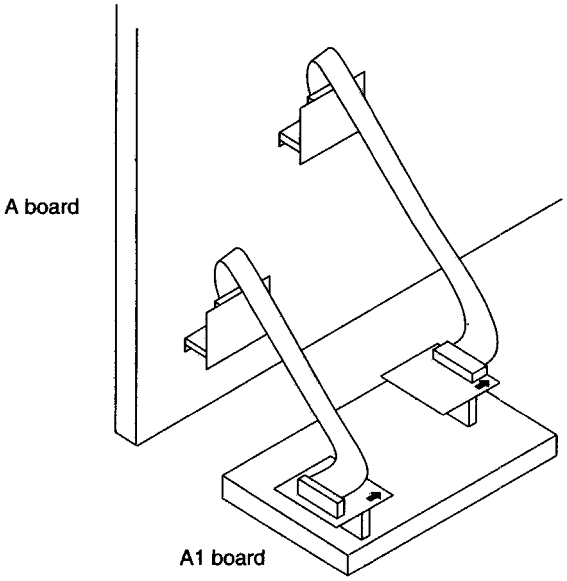


① Remove CN301 before removing A board.

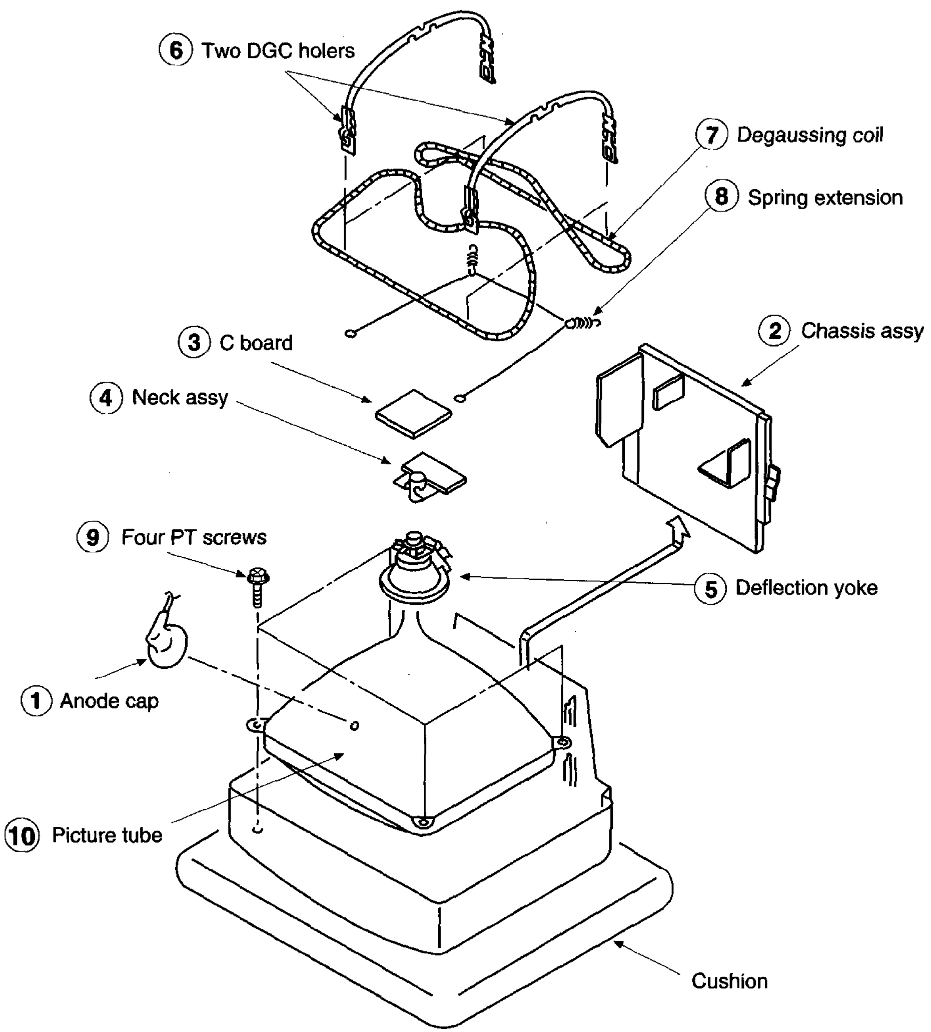
2-6. A EXTENSION BOARD


A board
BE-3D EXTENSION BOARD

2-7. A1 EXTENSION BOARDS


A board
A1 board

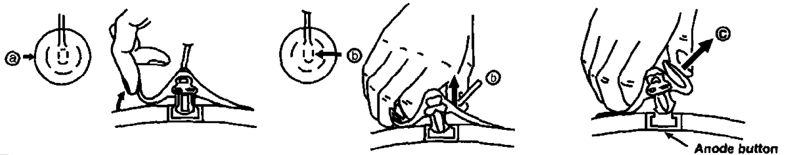
2-8. PICTURE TUBE REMOVAL


⑥ Two DGC holers
⑦ Degaussing coil
⑧ Spring extension
③ C board
② Chassis assy
④ Neck assy
⑨ Four PT screws
⑤ Deflection yoke
① Anode cap
⑩ Picture tube
Cushion

• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

*** REMOVING PROCEDURES.**


ⓐ
ⓑ
ⓑ
ⓒ
Anode button

① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ

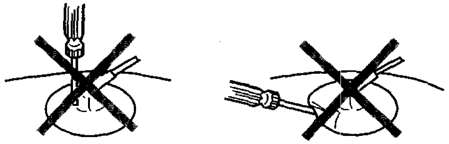
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

• HOW TO HANDLE AN ANODE-CAP

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

Note : There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

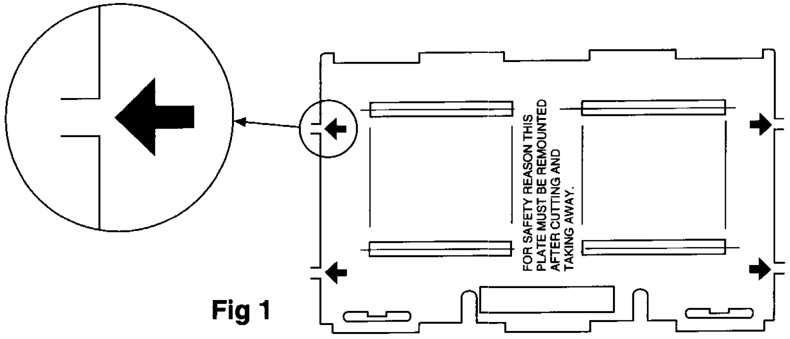

FOR SAFETY REASON THIS PLATE MUST BE REMOUNTED AFTER CUTTING AND TAKING AWAY.

Fig 1

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.
The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

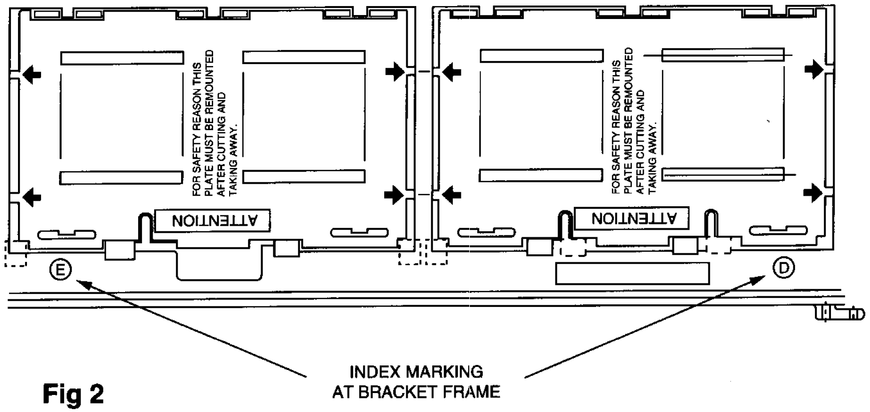

FOR SAFETY REASON THIS PLATE MUST BE REMOUNTED AFTER CUTTING AND TAKING AWAY.
ATTENTION
FOR SAFETY REASON THIS PLATE MUST BE REMOUNTED AFTER CUTTING AND TAKING AWAY.
ATTENTION
E
D
INDEX MARKING
AT BRACKET FRAME

Fig 2

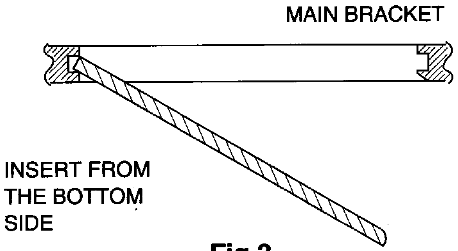

MAIN BRACKET
INSERT FROM
THE BOTTOM
SIDE

Fig 3

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

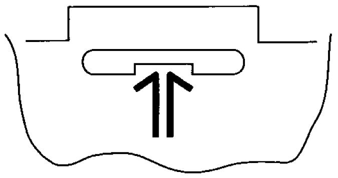


Fig 4

SECTION 3
SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

◑ Contrast .... 80% (or remote control normal)
☼ Brightness 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

Note: Testing equipment required.
1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparation:
- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   CONTRAST } normal
   BRIGHTNESS }
2. Position neck assy as shown in Fig.3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
5. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

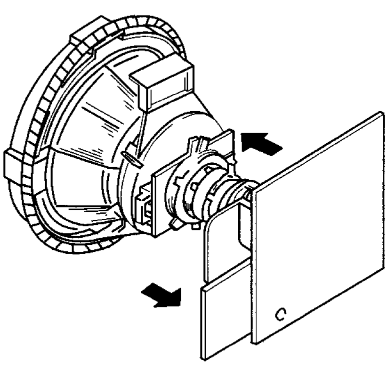


Fig. 3-1

Fig. 3-2

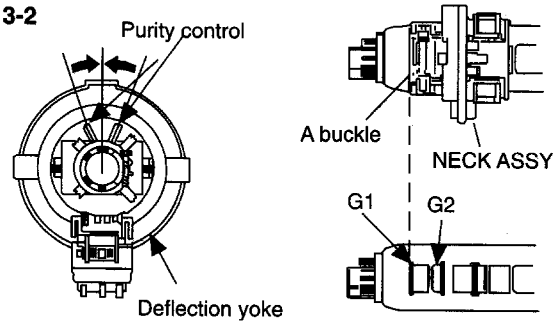
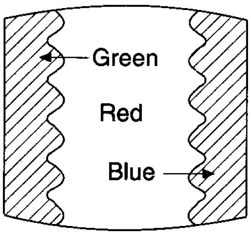

Purity control
A buckle
NECK ASSY
G1
G2
Deflection yoke

Fig. 3-3


Green
Red
Blue

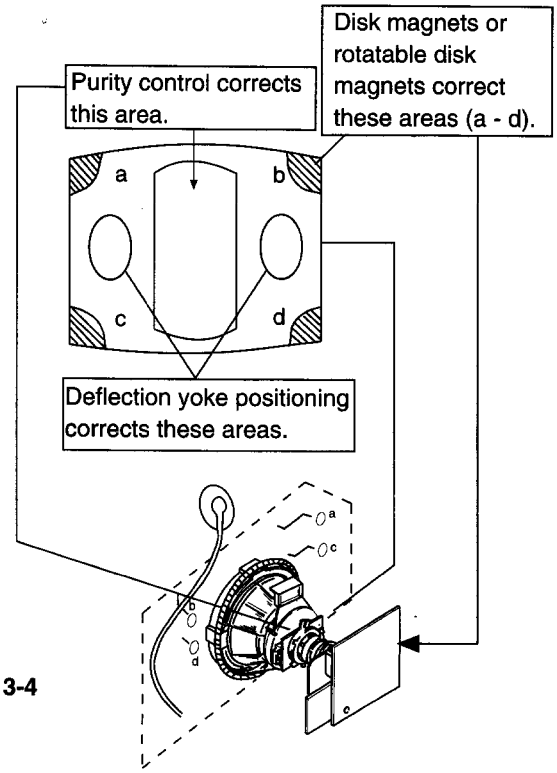

Disk magnets or rotatable disk magnets correct these areas (a - d).
Purity control corrects this area.
a
b
c
d
Deflection yoke positioning corrects these areas.
a
c
b
d
c

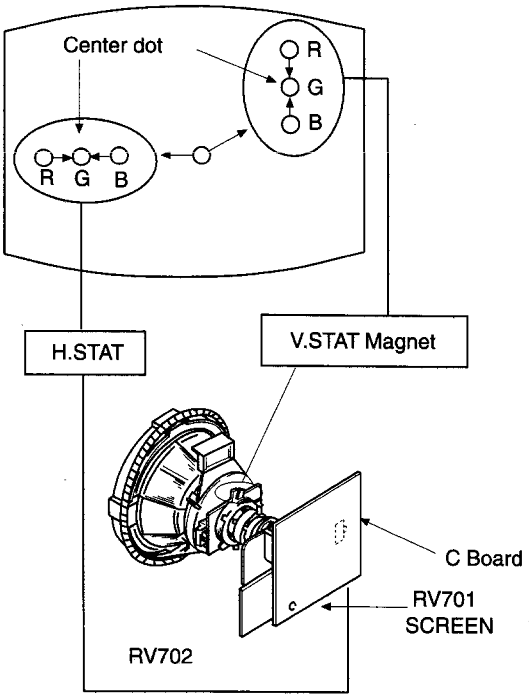
Fig. 3-4

3-2. CONVERGENCE

Preparation:

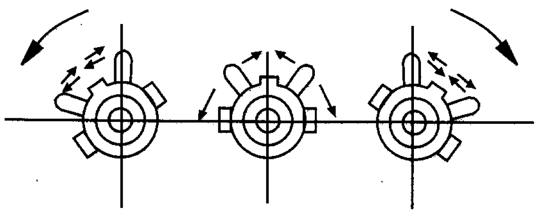
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

(1) Horizontal and vertical static convergence

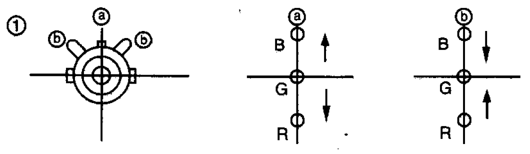


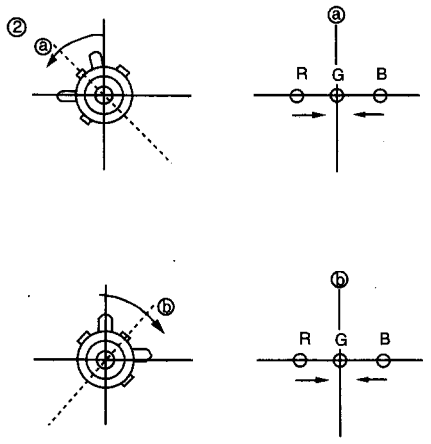
1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

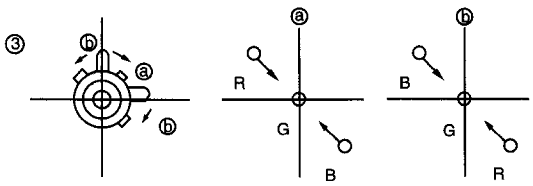
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



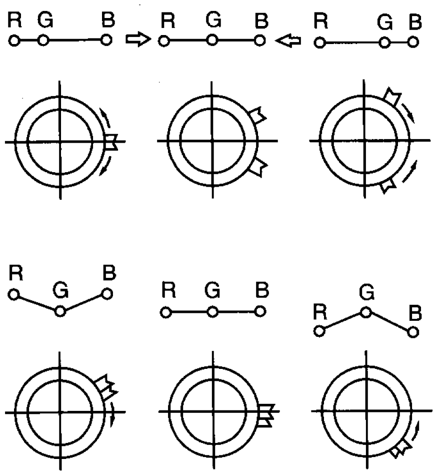
4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.

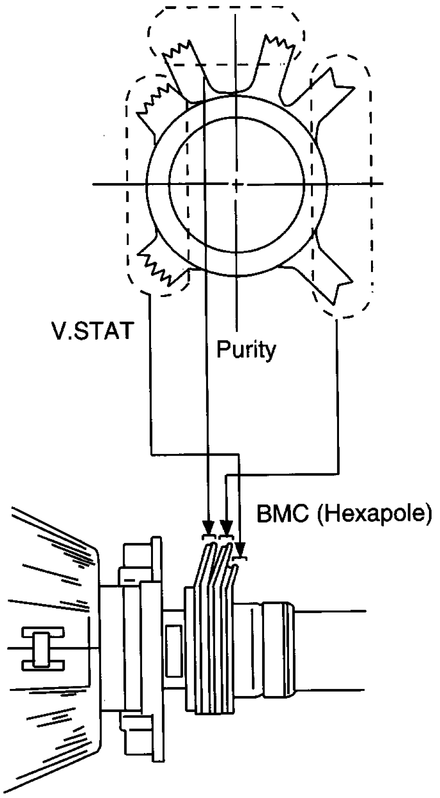






- Operation of BMC (Hexapole) Magnet


R G B
R G B
R G B
R G B
R G B
R G B


V.STAT
Purity
BMC (Hexapole)

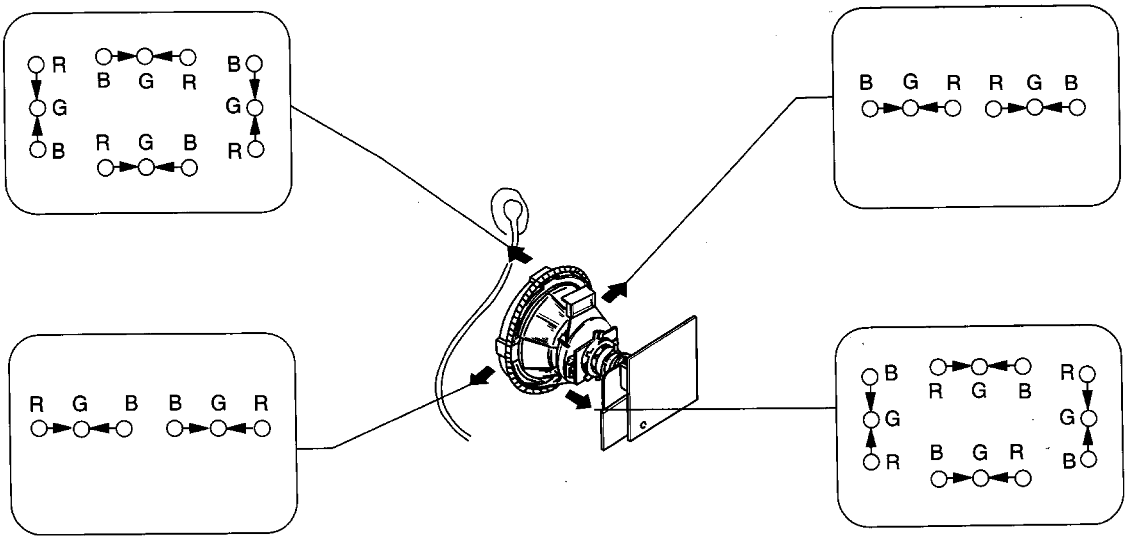
- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).

(2) Dynamic convergence adjustment.

Preparation:

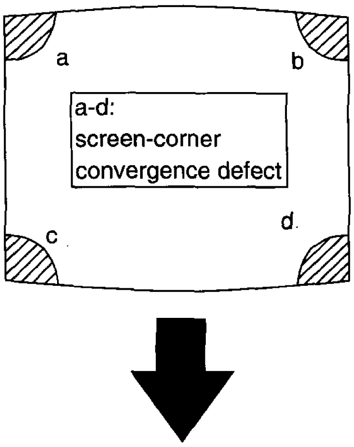
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

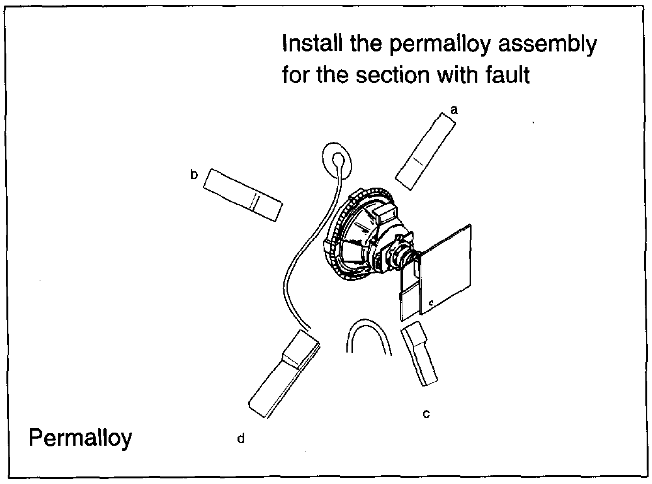
1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Re-install the deflection yoke spacer.


R G B
B G R
R G B
B G R
B G R R G B
R G B B G R
B G R
R G B
B G R
R G B

(3) Screen corner convergence.

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.


a
b
a-d:
screen-corner
convergence defect
c
d


Install the permalloy assembly
for the section with fault
a
b
c
d
Permalloy

3-3. WHITE BALANCE

G2 Setting

1. Switch the set into AV mode (apply no signal to the AV connectors).
2. Connect a Volt Meter to Test Point 1 on the A board.
3. Adjust RV01 to obtain a voltage of 3.0V ±0.3V.

White balance adjustment

1. Input an all white signal from the pattern generator.
2. Enter into the service mode.
3. Enter into Picture Adjustment service menu.
4. Select sub-contrast and adjust to 7.
5. Select the Green Drive and adjust so that the white balance becomes optimum.
6. Select the Blue Drive and adjust so that the white balance becomes optimum.
7. Press the TV button to return to TV operation.

PICTURE ADJUSTMENT

AFC mode	1
REF position	2
SCP BGR	1
SCP BGF	1
Trap Fo	0
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3

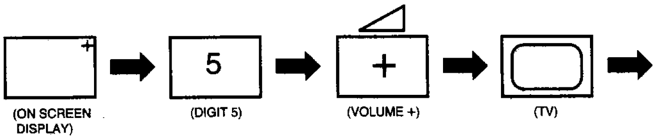
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-862.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT-- " will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press MENU on the commander to obtain the following menu on the screen.

TEST MENU

> Picture adjustment
Geometry
Wide
MSP
IC status
Current TV status

4. Move to the corresponding adjustment using the ◇ button on the commander.
5. Move the button to the right ◇ to enter the selected adjustment.
6. Turn off the power to quit the service mode when adjustments are completed.

PICTURE ADJUSTMENT	
AFC mode	1
REF position	2
SCP BGR	1
SCP BGF	1
Trap Fo	0
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3

GEOMETRY ADJUSTMENT	
V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj

WIDE	
V Aspect	47
V Scroll	31
Upper V Lin	0
Lower V Lin	0
Left Blanking	1
Right Blanking	11

MSP	
AGC ON/OFF	ON
Constant gain CDB	0
FM prescale FMP	36
Zwei mono-st WHI	36
Zwei st-mono WLO	18
Zwei mono-bi WMH	36
Zwei bi-mono WLO	18
Time zwei WML	41
Fawct limit	10
Fawct soll init FAW	12
Fawer tol	2
Nicam Err Max CCT	10
Nicam Err Min	0
Nicam Prescale NIP	97
Time Nicam	31
Carrier mute CRM	OFF
Audio clock ACO	HIZ
Scart prescale	25
Scart volume	64

IC STATUS (CXA2000 / CXA2040)	
CXA2000	
H lock	1
IKR	1
VNG	0
X-RAY	0
Colour system	3
CV1 Sync	1
CXA2040	
Sync sep	1
S1 mode pin	01
S2 mode pin	01
TUNER	
Tuner status	01101011

TV STATUS	
Text system	C TEXT/TV TEXT
Dolby	NO/YES
Text language set	WEST/EAST/RUSSIAN
Menu language set	WEST/EAST/RUSSIAN
Destination	B/D/U/K/L/E/A/R
Scart 16:9	OFF/ON
RGB priority	OFF/ON
Ageing	OFF/ON
Size	29/25
Colour trap sw	SECAM/ALL
Velocity mod	ON/OFF
AFT STATUS	WINDOW/HIGH/LOW

SUB BRIGHTNESS ADJUSTMENT

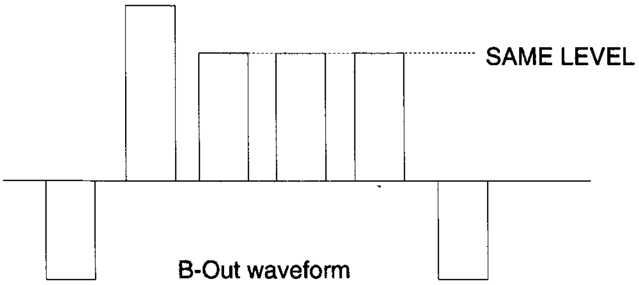
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the Sub-Brightness data so that there is barely a difference between the 0 IRE and 10 IRE signal.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to pin 3 of CN301 (A board).
4. Enter into the Picture Adjustment Service Menu.
5. Adjust the Sub-contrast data to obtain a black to white amplitude of 2.50 volts.

SUB COLOUR ADJUSTMENT

1. Receive a PAL Colour Bar video signal.
2. Connect an oscilloscope to pin 3 of CN301 (A board).
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the sub colour data so that cyan, magenta and blue colour bars are of equal height.



NOTE: The data shown in the TV STATUS table is dependant on destination, screen size and country.

SYSTEM B/G, D/K, I & L I.F ADJUSTMENT

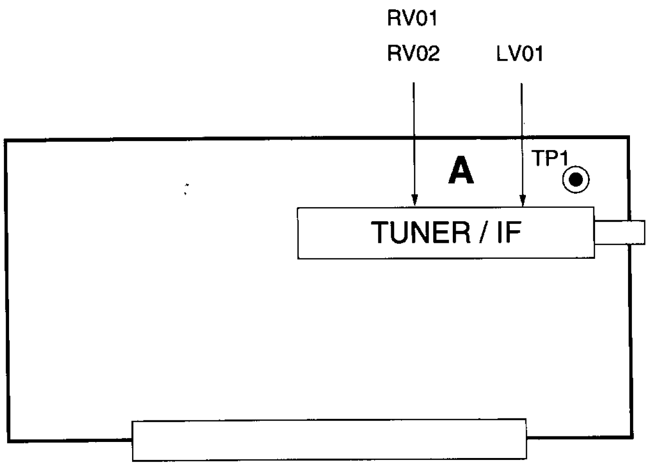
1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 38.9 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the I.F coil (LV01) until the "AFT Status" indicates a " Window " condition.

SYSTEM L BAND 1 I.F ADJUSTMENT

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 34.2 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the RV02 until the "AFT Status" indicates a " Window " condition.

TUNER AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at test point 1 (A board).
3. Adjust RV01 to obtain a voltage of 3.0V ± 0.3V.



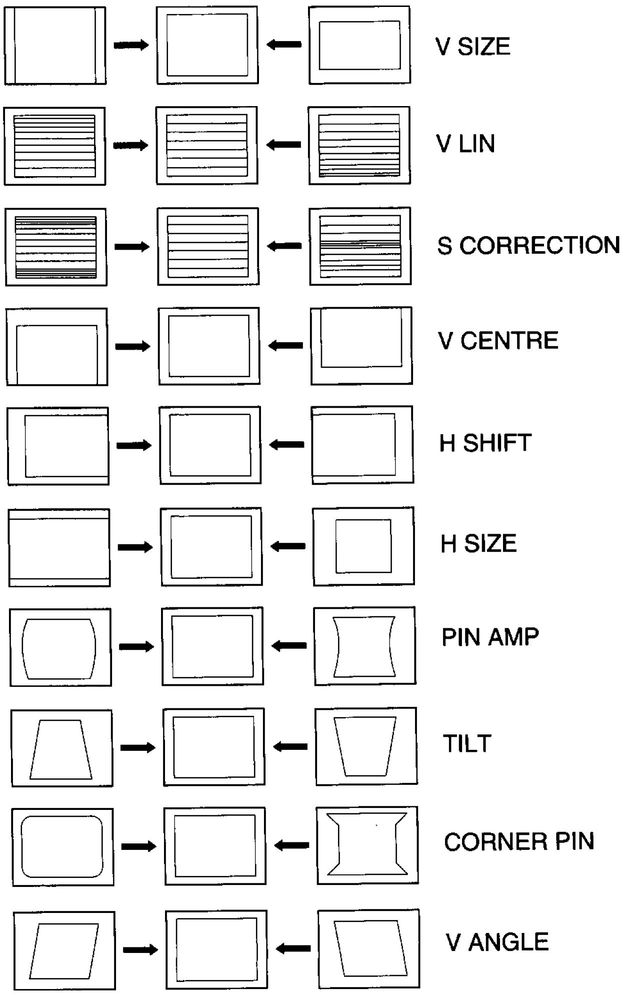
- A Board component side -

DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the Geometry Adjustment Service Menu.
2. Select and adjust each item in order to obtain the optimum image.

GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj



4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD " TT " appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode.

00	Switch test mode 2 off
01	Picture maximum
02	Picture minimum
03	Volume 30%
04	Set service menu mode
05	Set production menu mode
06	Volume 80%
07	Set ageing condition
08	Set shipping condition
09	Language reset
10	No function
11	Adjustment without OSD
12	Dummy
13	Display TV configuration
14	Forced AV 6:9 mode
15	Reset LPM from ROM data
16	copy LPM to reset memory
17	Preset label for AV sources
18	RGB priority on/off
19	Clear all preset labels
20	No function
21	Sub contrast
22	Sub colour
23	Sub brightness
24	Set destination = U
25	Set destination = D
26	Set destination = B
27	Set destination = K
28	Set destination = L
29	Set destination = E
30	No function
31	Set destination =A
32	Dummy
33	Auto AGC
34	Dummy
35	Manual AGC adjust

36-40	Dummy
41	Re-initialise NVM
42	Production use only
43	Initialise geometry settings
44	Initialise all favourite pages = 100
45	Channel locks = off
46	Dealer commander mode
47	Default MSP settings
48	Restore NVM test byte
49	Delete NVM test byte
50-60	No function
61	Turn on Dolby Pro Logic mode
62	White noise to left speaker
63	White noise to right speaker
64	White noise to centre speaker
65	White noise to rear speaker
66	Set standard stereo mode
67	Set Pro Logic normal mode
68	Set Pro Logic wide mode
69	Set Pro Logic phantom mode
70	No function
71	Picture rotation on/off
72	Dolby register settings
74	No function
75	Reset picture colour balance
76	Reset picture geometry
77	Reset sound settings
78	Reset error codes in the NVM
79-99	No function

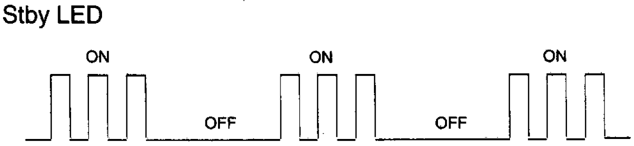
4-3. BE-3D SELF DIAGNOSTIC SOFTWARE

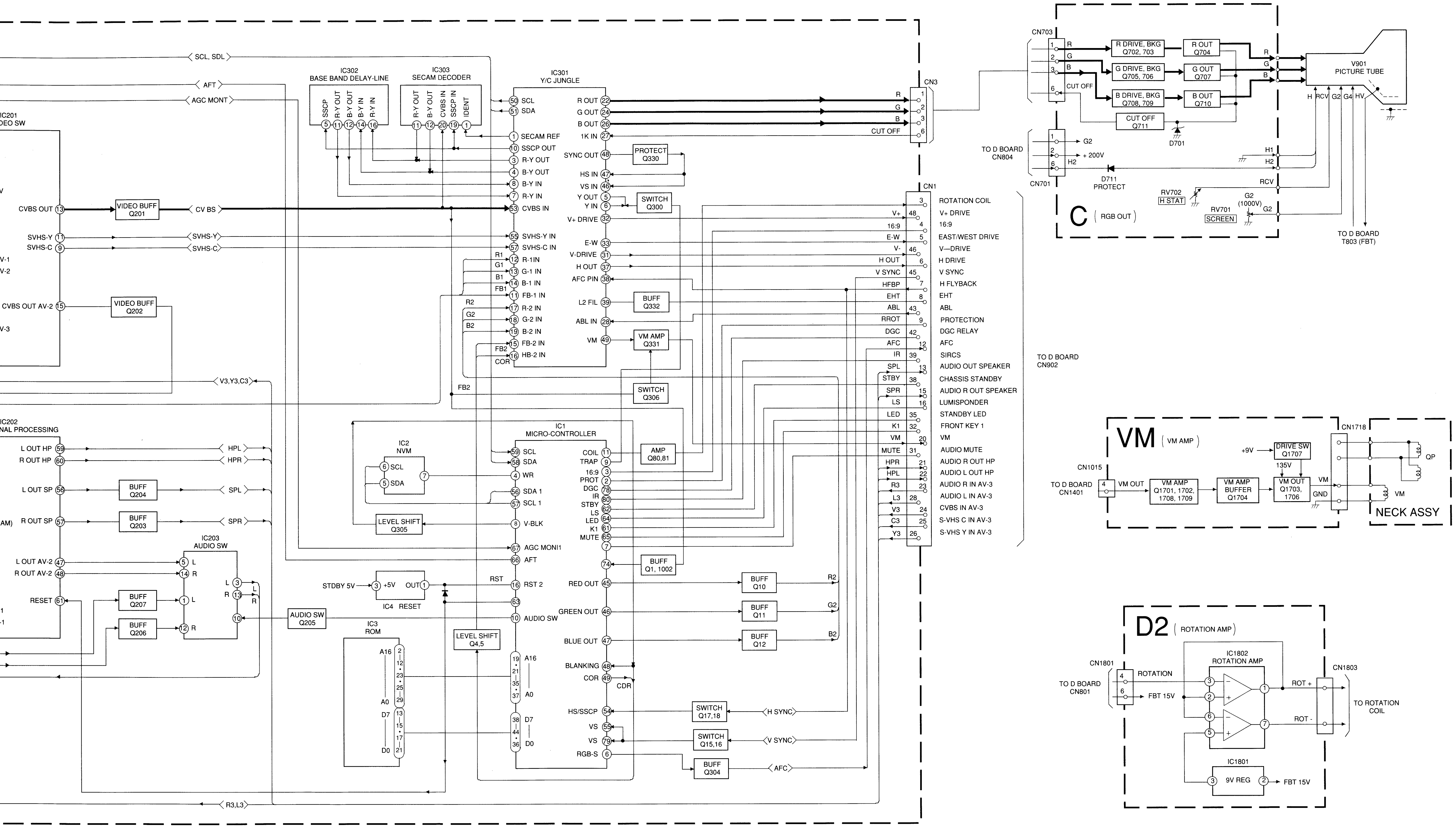
The identification of errors within the BE-3D chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1, non fatal errors are reported with this method.

Table 1

ERROR	LED ERROR COUNT
Protection circuit trip < ANY TIME >	02
IIC SCL LOW < POWER UP ONLY >	03
IIC SDA LOW < POWER UP ONLY >	04
IIC SDA & SCL LOW < POWER UP ONLY >	05
Jungle/Choroma controller no acknowledge < POWER UP ONLY >	06
Video Switch no acknowledge < POWER UP ONLY >	07
Tuner no acknowledge	08
MSP no acknowledge	09
NVM no acknowledge	10
M3L TXD LOW < POWER UP ONLY >	11
M3L RXD LOW < POWER UP ONLY >	12
M3L ENABLE LOW < POWER UP ONLY >	13
M3L TXD & RXD LOW < POWER UP ONLY >	14
Compact Text test fail < POWER UP ONLY >	15
AV switch cannot power on reset	16
Cannot initialise jungle	17
NVM acknowledge fail after initialisation	18
Multiple devices with no acknowledge < POWER UP ONLY >	19
Compacttext run-time failure	20
AVSWITCH response failure after power up	21
JUNGLE/CHROMA controller response failure after power up	22
CompactText does not respond	23

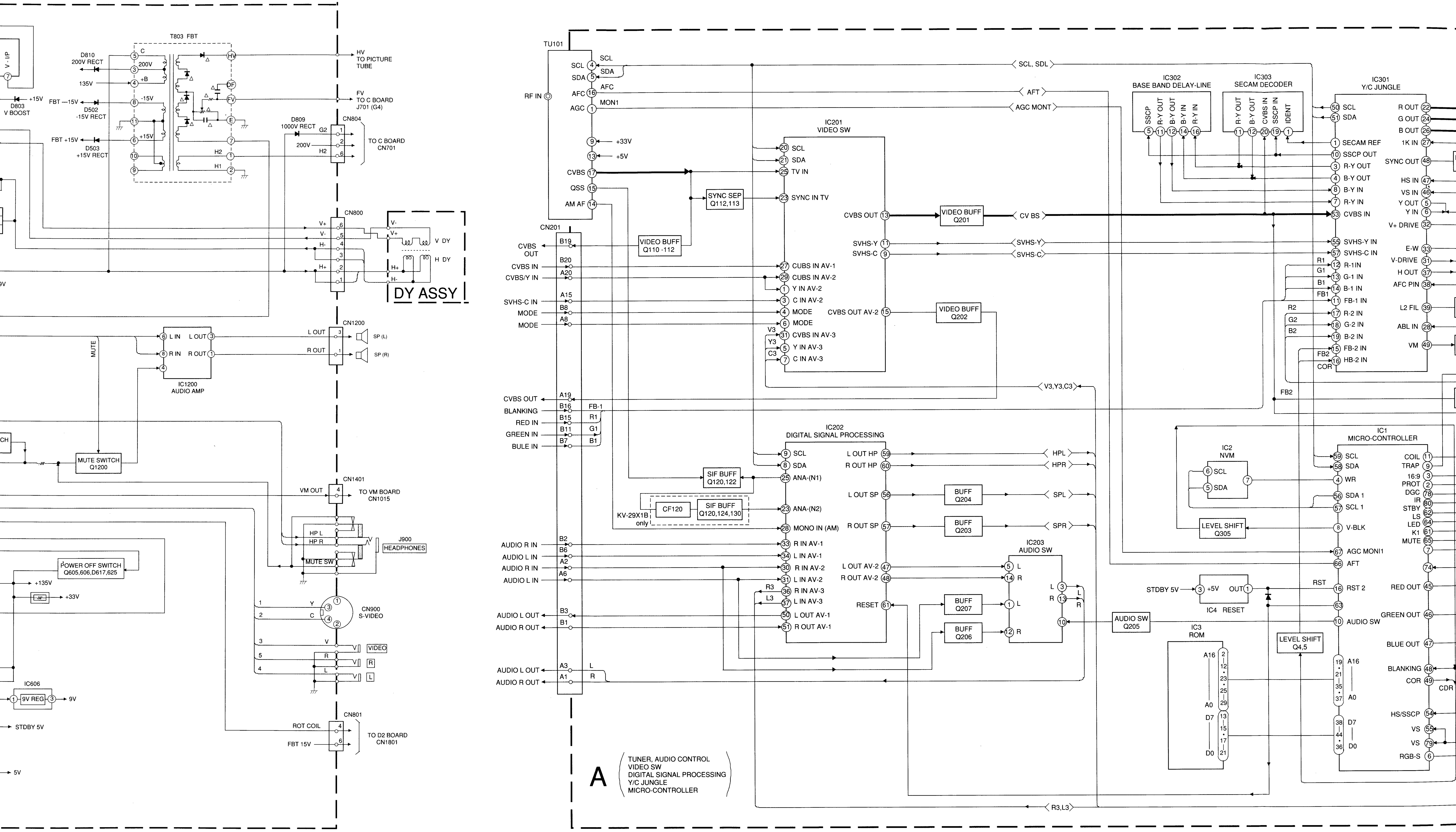
Flash Timing Example : e.g. error number 3.





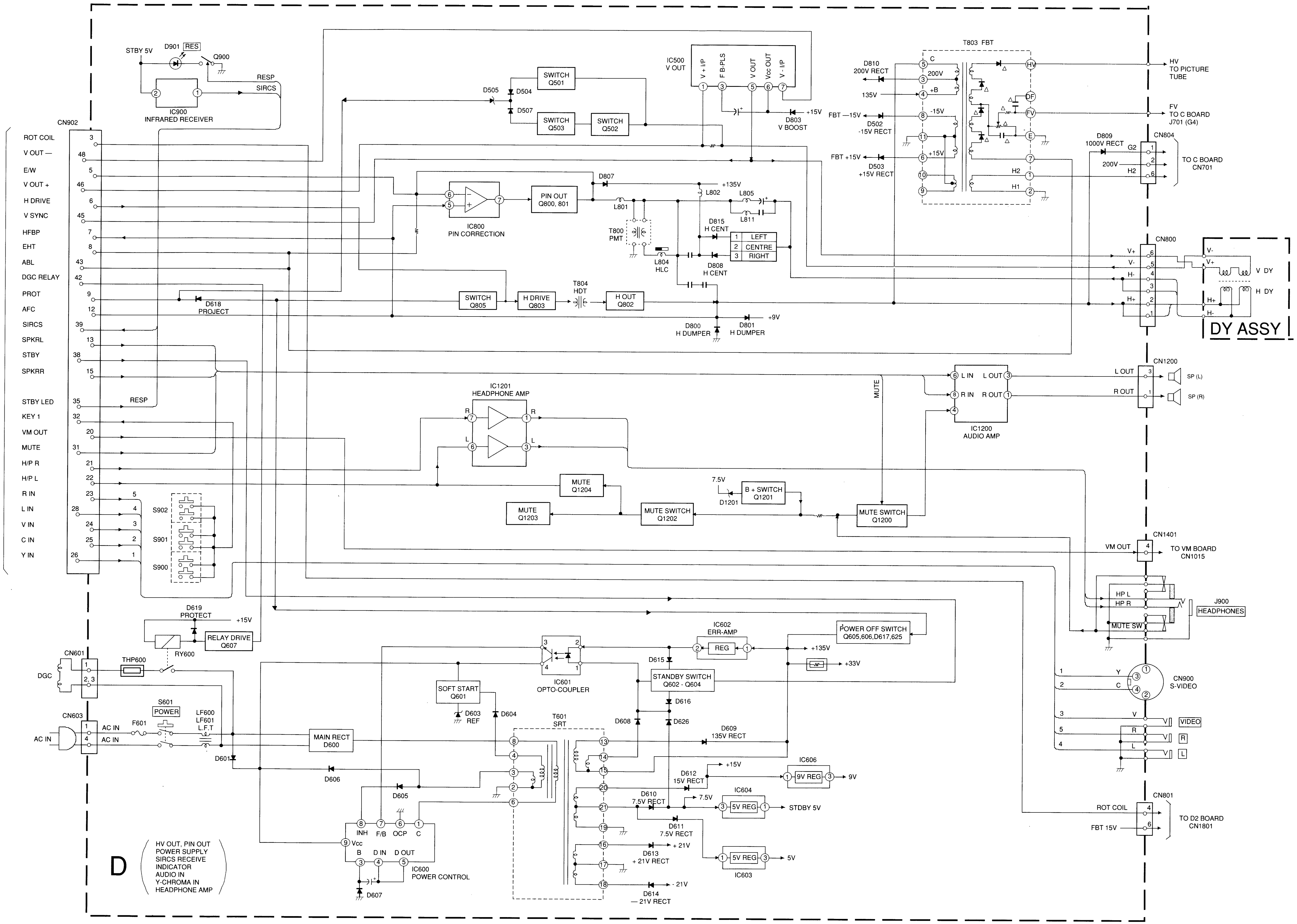
SCL, SDL
AFT
AGC MONT
IC201
DEO SW
CVBS OUT 13
VIDEO BUFF Q201
CV BS
SVHS-Y 11
SVHS-C 9
SVHS-Y
SVHS-C
CVBS OUT AV-2 15
VIDEO BUFF Q202
V3,Y3,C3
IC302
BASE BAND DELAY-LINE
SSCP
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
IC303
SECAM DECODER
R-Y OUT
B-Y OUT
CVBS IN
SSCP IN
IDENT
IC301
Y/C JUNGLE
SCL
SDA
SECAM REF
SSCP OUT
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
CVBS IN
SVHS-Y IN
SVHS-C IN
R-1 IN
G-1 IN
B-1 IN
FB-1 IN
R-2 IN
G-2 IN
B-2 IN
FB-2 IN
HB-2 IN
R1
G1
B1
FB1
R2
G2
B2
FB2
COR
R OUT
G OUT
B OUT
1K IN
SYNC OUT
HS IN
VS IN
Y OUT
Y IN
V+ DRIVE
E-W
V-DRIVE
H OUT
AFC PIN
L2 FIL
ABL IN
VM
PROTECT Q330
SWITCH Q300
BUFF Q332
VM AMP Q331
SWITCH Q306
FB2
CN3
R
G
B
CUT OFF
CN1
ROTATION COIL
V+ DRIVE
16:9
EAST/WEST DRIVE
V—DRIVE
H DRIVE
V SYNC
H FLYBACK
EHT
ABL
PROTECTION
DGC RELAY
AFC
SIRCS
AUDIO OUT SPEAKER
CHASSIS STANDBY
AUDIO R OUT SPEAKER
LUMISPONDER
STANDBY LED
FRONT KEY 1
VM
AUDIO MUTE
AUDIO R OUT HP
AUDIO L OUT HP
AUDIO R IN AV-3
AUDIO L IN AV-3
CVBS IN AV-3
S-VHS C IN AV-3
S-VHS Y IN AV-3
V+
16:9
E-W
V-
H OUT
V SYNC
HFBP
EHT
ABL
RROT
DGC
AFC
IR
SPL
STBY
SPR
LS
LED
K1
VM
MUTE
HPR
HPL
R3
L3
V3
C3
Y3
TO D BOARD CN902
IC202
NAL PROCESSING
L OUT HP 59
R OUT HP 60
HPL
HPR
L OUT SP 56
BUFF Q204
SPL
R OUT SP 57
BUFF Q203
SPR
IC203
AUDIO SW
L OUT AV-2 47
R OUT AV-2 48
RESET 61
BUFF Q207
BUFF Q206
AUDIO SW Q205
R3,L3
IC2
NVM
SCL
SDA
WR
LEVEL SHIFT Q305
IC1
MICRO-CONTROLLER
SCL
SDA
WR
SDA 1
SCL 1
V-BLK
AGC MONI1
AFT
RST 2
AUDIO SW
A16
A0
D7
D0
COIL
TRAP
16:9
PROT
DGC
IR
STBY
LS
LED
K1
MUTE
AMP Q80,81
BUFF Q1, 1002
RED OUT
GREEN OUT
BLUE OUT
BLANKING
COR
CDR
HS/SSCP
VS
VS
RGB-S
BUFF Q10
BUFF Q11
BUFF Q12
R2
G2
B2
SWITCH Q17,18
SWITCH Q15,16
BUFF Q304
H SYNC
V SYNC
AFC
STDBY 5V
+5V
OUT
IC4 RESET
RST
IC3
ROM
A16
A0
D7
D0
LEVEL SHIFT Q4,5
CN703
R
G
B
CUT OFF
R DRIVE, BKG Q702, 703
G DRIVE, BKG Q705, 706
B DRIVE, BKG Q708, 709
R OUT Q704
G OUT Q707
B OUT Q710
CUT OFF Q711
D701
V901
PICTURE TUBE
H RCV G2 G4 HV
TO D BOARD CN804
CN701
G2
+ 200V
H2
D711
PROTECT
H1
H2
RCV
RV702
H STAT
RV701
SCREEN
G2 (1000V)
G2
C
(RGB OUT)
TO D BOARD T803 (FBT)
VM
(VM AMP)
CN1015
TO D BOARD CN1401
VM OUT
VM AMP Q1701, 1702, 1708, 1709
VM AMP BUFFER Q1704
+9V
DRIVE SW Q1707
135V
VM OUT Q1703, 1706
VM
GND
CN1718
QP
VM
NECK ASSY
D2
(ROTATION AMP)
CN1801
TO D BOARD CN801
ROTATION
FBT 15V
IC1802
ROTATION AMP
ROT +
ROT -
CN1803
TO ROTATION COIL
IC1801
9V REG
FBT 15V

BLOCK DIAGRAM (2)

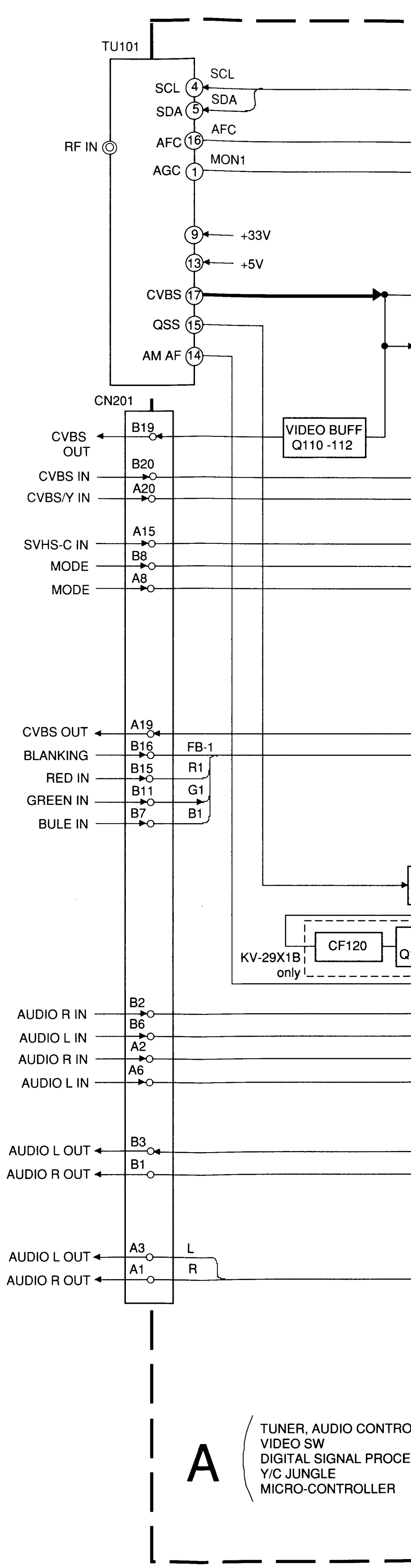


V - I/P
D810
200V RECT
D803
V BOOST
+15V
FBT —15V
D502
-15V RECT
FBT +15V
D503
+15V RECT
135V
T803 FBT
C
200V
+B
-15V
+15V
HV
DF
FV
E
H2
H1
HV
TO PICTURE TUBE
FV
TO C BOARD
J701 (G4)
D809
1000V RECT
G2
200V
H2
CN804
TO C BOARD
CN701
CN800
V+
V-
H-
H+
V DY
H DY
DY ASSY
9V
L IN
R IN
L OUT
R OUT
IC1200
AUDIO AMP
MUTE
CN1200
L OUT
R OUT
SP (L)
SP (R)
CH
MUTE SWITCH
Q1200
CN1401
VM OUT
TO VM BOARD
CN1015
HP L
HP R
MUTE SW
J900
HEADPHONES
POWER OFF SWITCH
Q605,606,D617,625
+135V
+33V
Y
C
CN900
S-VIDEO
V
VIDEO
R
L
IC606
9V REG
9V
STDBY 5V
5V
CN801
ROT COIL
FBT 15V
TO D2 BOARD
CN1801
TU101
RF IN
SCL
SDA
AFC
AGC
MON1
+33V
+5V
CVBS
QSS
AM AF
SCL, SDL
AFT
AGC MONT
CN201
CVBS OUT
CVBS IN
CVBS/Y IN
SVHS-C IN
MODE
MODE
CVBS OUT
BLANKING
RED IN
GREEN IN
BULE IN
AUDIO R IN
AUDIO L IN
AUDIO R IN
AUDIO L IN
AUDIO L OUT
AUDIO R OUT
AUDIO L OUT
AUDIO R OUT
B19
B20
A20
A15
B8
A8
A19
B16
B15
B11
B7
B2
B6
A2
A6
B3
B1
A3
A1
FB-1
R1
G1
B1
L
R
VIDEO BUFF
Q110 -112
SYNC SEP
Q112,113
IC201
VIDEO SW
SCL
SDA
TV IN
SYNC IN TV
CUBS IN AV-1
CUBS IN AV-2
Y IN AV-2
C IN AV-2
MODE
MODE
CVBS IN AV-3
Y IN AV-3
C IN AV-3
V3
Y3
C3
CVBS OUT
SVHS-Y
SVHS-C
CVBS OUT AV-2
VIDEO BUFF
Q201
CV BS
VIDEO BUFF
Q202
SVHS-Y
SVHS-C
V3,Y3,C3
IC202
DIGITAL SIGNAL PROCESSING
SCL
SDA
ANA-(N1)
ANA-(N2)
MONO IN (AM)
R IN AV-1
L IN AV-1
R IN AV-2
L IN AV-2
R IN AV-3
L IN AV-3
L OUT AV-1
R OUT AV-1
R3
L3
L OUT HP
R OUT HP
L OUT SP
R OUT SP
L OUT AV-2
R OUT AV-2
RESET
SIF BUFF
Q120,122
CF120
SIF BUFF
Q120,124,130
KV-29X1B
only
HPL
HPR
SPL
SPR
BUFF
Q204
BUFF
Q203
BUFF
Q207
BUFF
Q206
IC203
AUDIO SW
L
R
R3,L3
AUDIO SW
Q205
IC302
BASE BAND DELAY-LINE
SSCP
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
IC303
SECAM DECODER
R-Y OUT
B-Y OUT
CVBS IN
SSCP IN
IDENT
IC301
Y/C JUNGLE
SCL
SDA
SECAM REF
SSCP OUT
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
CVBS IN
SVHS-Y IN
SVHS-C IN
R-1IN
G-1 IN
B-1 IN
FB-1 IN
R-2 IN
G-2 IN
B-2 IN
FB-2 IN
HB-2 IN
R1
G1
B1
FB1
R2
G2
B2
FB2
COR
FB2
R OUT
G OUT
B OUT
1K IN
SYNC OUT
HS IN
VS IN
Y OUT
Y IN
V+ DRIVE
E-W
V-DRIVE
H OUT
AFC PIN
L2 FIL
ABL IN
VM
IC2
NVM
SCL
SDA
LEVEL SHIFT
Q305
IC1
MICRO-CONTROLLER
SCL
SDA
WR
SDA 1
SCL 1
V-BLK
AGC MONI1
AFT
RST 2
AUDIO SW
A16
A0
D7
D0
COIL
TRAP
16:9
PROT
DGC
IR
STBY
LS
LED
K1
MUTE
RED OUT
GREEN OUT
BLUE OUT
BLANKING
COR
CDR
HS/SSCP
VS
VS
RGB-S
STDBY 5V
+5V
OUT
IC4 RESET
RST
IC3
ROM
A16
A0
D7
D0
LEVEL SHIFT
Q4,5
A
TUNER, AUDIO CONTROL
VIDEO SW
DIGITAL SIGNAL PROCESSING
Y/C JUNGLE
MICRO-CONTROLLER

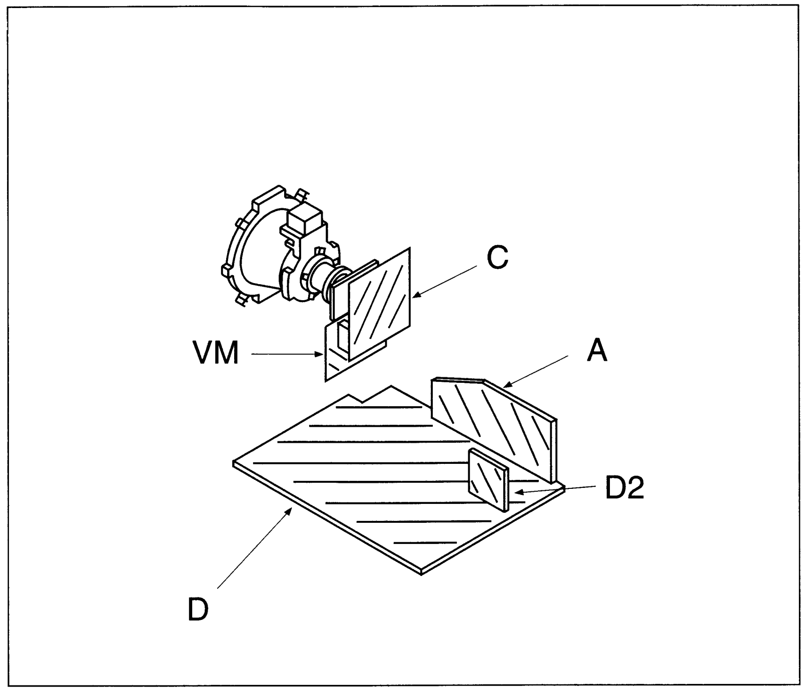
5-1. BLOCK DIAGRAM (1)


STBY 5V
D901 RES
Q900
RESP
SIRCS
IC900
INFRARED RECEIVER
CN902
ROT COIL
V OUT −
E/W
V OUT +
H DRIVE
V SYNC
HFBP
EHT
ABL
DGC RELAY
PROT
AFC
SIRCS
SPKRL
STBY
SPKRR
STBY LED
KEY 1
VM OUT
MUTE
H/P R
H/P L
R IN
L IN
V IN
C IN
Y IN
TO A BOARD
CN11
SWITCH Q501
SWITCH Q503
SWITCH Q502
D505
D504
D507
IC500
V OUT
V + I/P
FB-PLS
V OUT
Vcc OUT
V - I/P
D803
V BOOST
+15V
IC800
PIN CORRECTION
PIN OUT
Q800, 801
D807
+135V
L801
L802
L805
L811
T800
PMT
D815
H CENT
LEFT
CENTRE
RIGHT
L804
HLC
D808
H CENT
D618
PROJECT
SWITCH Q805
H DRIVE Q803
T804
HDT
H OUT Q802
+9V
D800
H DUMPER
D801
H DUMPER
T803 FBT
D810
200V RECT
135V
FBT −15V
D502
-15V RECT
FBT +15V
D503
+15V RECT
HV
TO PICTURE TUBE
FV
TO C BOARD
J701 (G4)
D809
1000V RECT
G2
200V
H2
H1
CN804
TO C BOARD
CN701
CN800
V+
V-
H-
H+
V DY
H DY
DY ASSY
MUTE
IC1200
AUDIO AMP
L IN
R IN
L OUT
R OUT
CN1200
SP (L)
SP (R)
IC1201
HEADPHONE AMP
MUTE Q1204
MUTE Q1203
MUTE SWITCH Q1202
7.5V
D1201
B + SWITCH Q1201
MUTE SWITCH Q1200
S902
S901
S900
CN1401
VM OUT
TO VM BOARD
CN1015
HP L
HP R
MUTE SW
J900
HEADPHONES
D619
PROTECT
+15V
RELAY DRIVE Q607
RY600
CN601
DGC
THP600
CN603
AC IN
S601
POWER
F601
LF600
LF601
L.F.T
D601
MAIN RECT D600
D606
IC601
OPTO-COUPLER
IC602
ERR-AMP
REG
+135V
+33V
POWER OFF SWITCH
Q605,606,D617,625
SOFT START Q601
D603 REF
D604
D615
STANDBY SWITCH
Q602 - Q604
D616
D608
D626
T601
SRT
D609
135V RECT
D605
D612
15V RECT
+15V
IC606
9V REG
9V
D610
7.5V RECT
7.5V
IC604
5V REG
STBY 5V
D611
7.5V RECT
D613
+ 21V RECT
+ 21V
IC603
5V REG
5V
D614
− 21V RECT
- 21V
INH
F/B
OCP
C
Vcc
B
D IN
D OUT
IC600
POWER CONTROL
D607
CN900
S-VIDEO
Y
C
V
R
L
VIDEO
CN801
ROT COIL
FBT 15V
TO D2 BOARD
CN1801
D
HV OUT, PIN OUT
POWER SUPPLY
SIRCS RECEIVE
INDICATOR
AUDIO IN
Y-CHROMA IN
HEADPHONE AMP

BLOCK DIAGRAM (


TU101
SCL
SDA
AFC
MON1
AGC
RF IN
+33V
+5V
CVBS
QSS
AM AF
CN201
CVBS OUT
CVBS IN
CVBS/Y IN
SVHS-C IN
MODE
MODE
VIDEO BUFF
Q110 -112
CVBS OUT
BLANKING
RED IN
GREEN IN
BULE IN
FB-1
R1
G1
B1
KV-29X1B only
CF120
AUDIO R IN
AUDIO L IN
AUDIO R IN
AUDIO L IN
AUDIO L OUT
AUDIO R OUT
AUDIO L OUT
AUDIO R OUT
L
R
A
TUNER, AUDIO CONTRO
VIDEO SW
DIGITAL SIGNAL PROCE
Y/C JUNGLE
MICRO-CONTROLLER

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm Rating electrical power ¼ W

- ▨ : nonflammable resistor.
- — : internal component.
- ▭ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- ⌗ : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

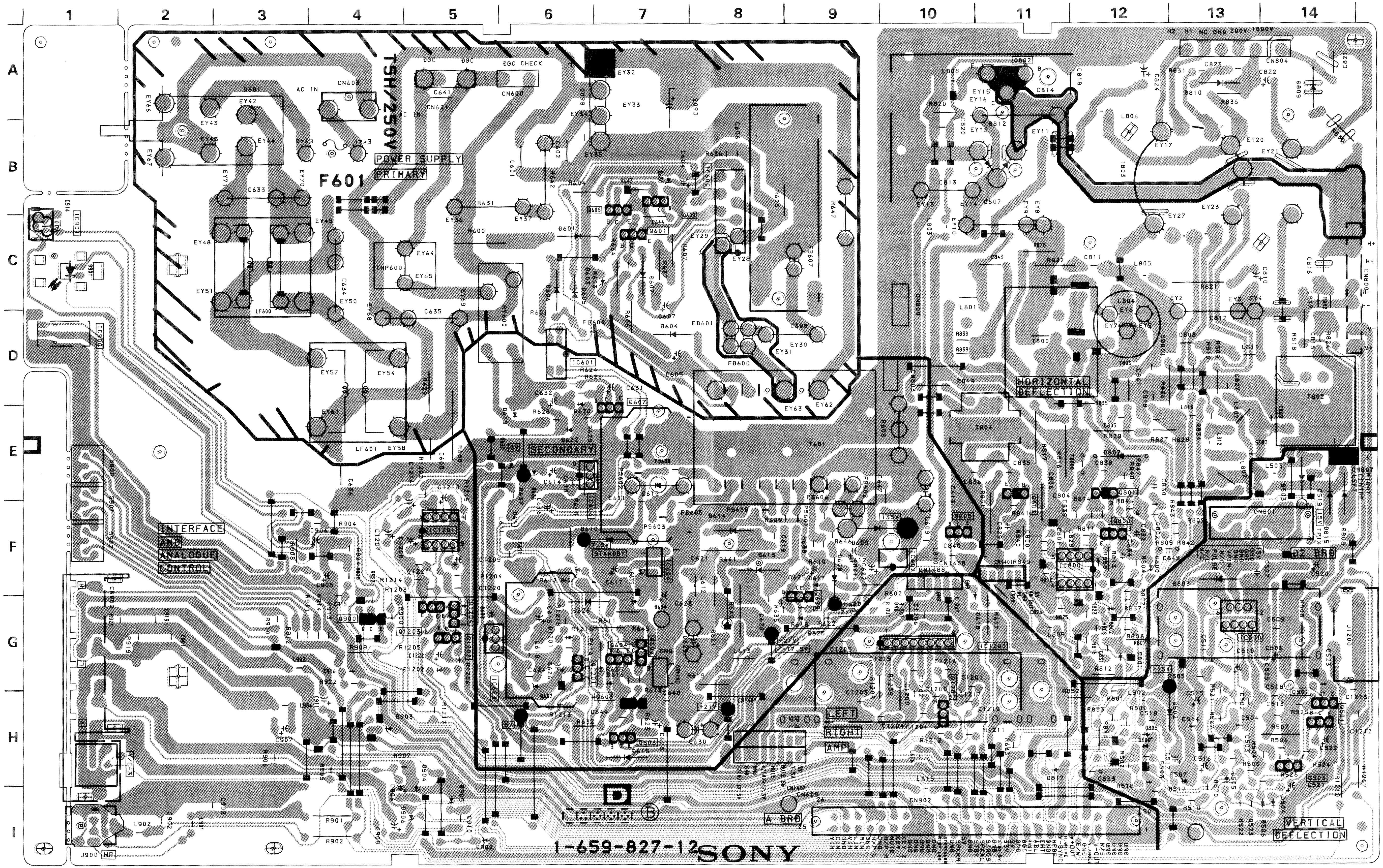
Reference information

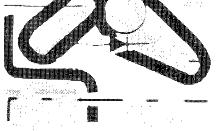
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✕	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ━ : B+ bus.
- ➡ : signal path. (RF)

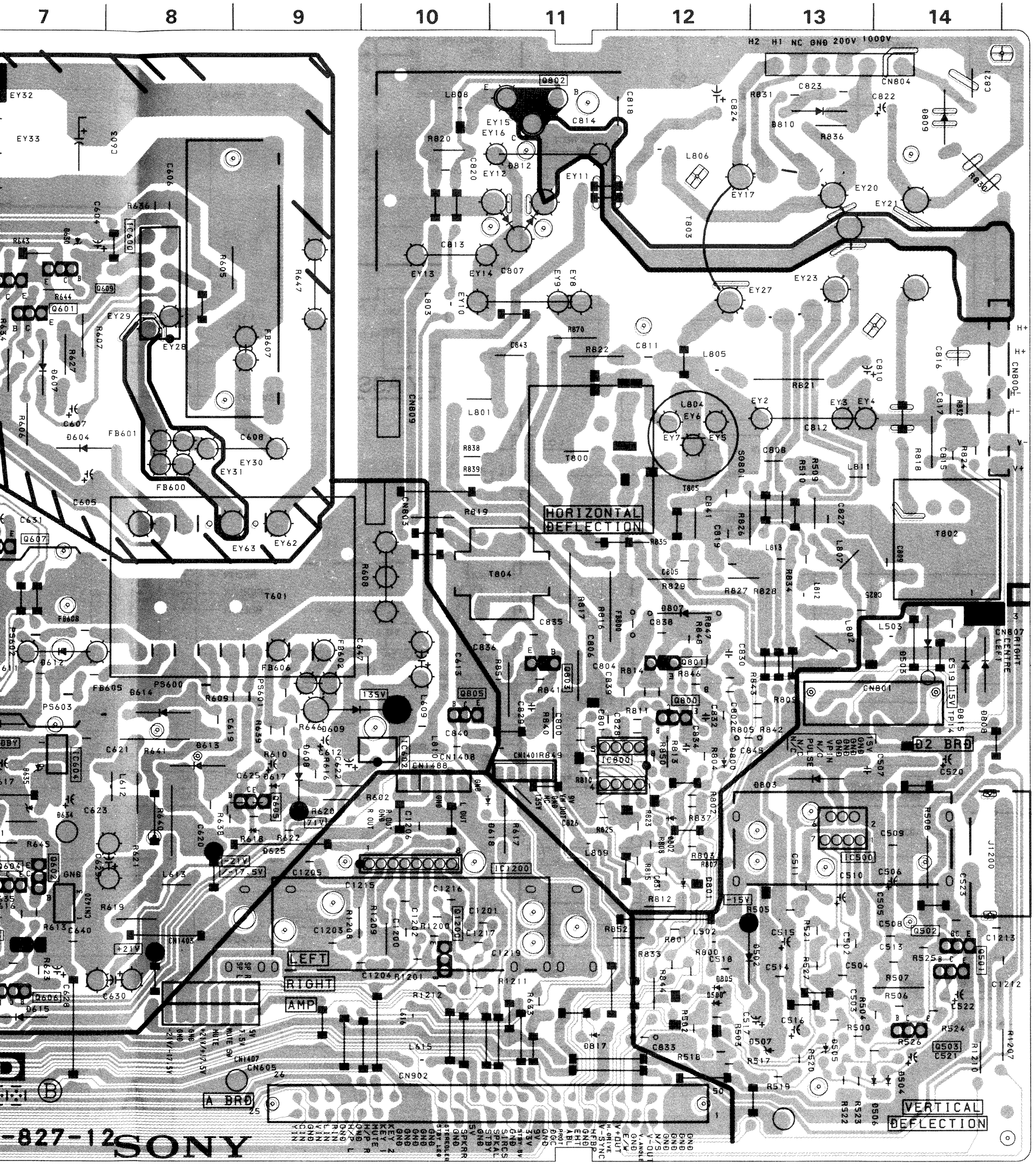
D HV OUT, PIN OUT, POWER SUPPLY, CONTROL SW, AUDIO IN
Y-CHROMA IN, HEADPHONE IN, SIRCS RECEIVE, INDICAITON

D Board


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
T5H/250V
F601
POWER SUPPLY
PRIMARY
AC IN
DGC
DGC CHECK
SECONDARY
STANDBY
HORIZONTAL
DEFLECTION
VERTICAL
DEFLECTION
INTERFACE
AND
ANALOGUE
CONTROL
LEFT
RIGHT
AMP
D2 BRD
A BRD
H2 H1 NC GND 200V 1000V
135V
-15V
+21V
-21V
-17.5V
1-659-827-12
SONY
D
J900 HP
Y/C-S

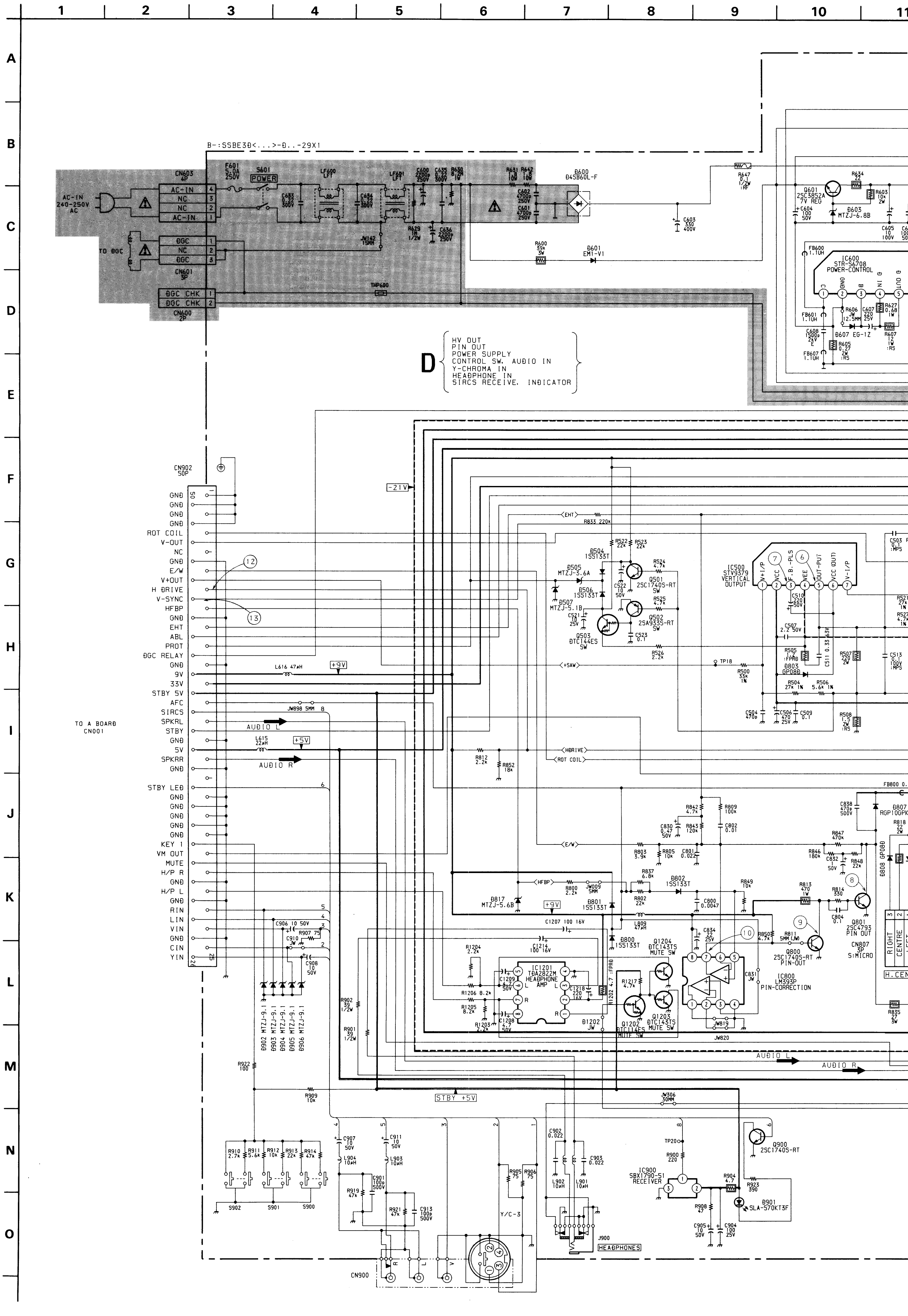


The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.


7
8
9
10
11
12
13
14
H2 H1 NC GND 200V 1000V
CN804
HORIZONTAL DEFLECTION
T800
T804
T601
T802
CN801
D2 BRD
IC800
IC500
IC1200
LEFT
RIGHT
AMP
A BRD
CN902
VERTICAL DEFLECTION
J1200
-827-12
SONY

D BOARD

IC		DIODE	
IC500	G-13	D600	A-7
IC600	B-8	D601	C-6
IC601	D-6	D603	C-7
IC602	F-10	D604	D-7
IC603	G-5	D605	C-6
IC604	F-7	D606	C-6
IC606	E-6	D607	C-7
IC800	F-12	D608	F-9
IC900	D-1	D609	F-9
IC1200	G-10	D610	F-7
IC1201	F-5	D611	F-6
		D612	E-7
TRANSISTOR		D613	F-8
Q501	H-14	D614	F-8
Q502	H-14	D615	H-7
Q503	H-14	D616	G-7
Q601	C-7	D617	F-9
Q602	G-7	D618	F-11
Q603	H-7	D619	E-6
Q604	G-7	D620	E-6
Q605	F-9	D622	E-6
Q606	H-7	D625	G-9
Q607	D-7	D626	G-6
Q800	F-12	D631	F-6
Q801	E-12	D800	F-12
Q802	A-11	D801	G-12
Q803	E-11	D802	G-12
Q805	F-10	D803	F-13
Q900	G-4	D807	E-12
Q1200	H-10	D808	E-14
Q1201	G-6	D809	A-14
Q1202	G-5	D810	A-13
Q1203	G-5	D812	B-11
Q1204	G-5	D815	E-14
DIODE		D817	H-11
D500	H-12	D901	C-1
D502	H-13	D902	I-5
D503	I-14	D903	H-4
D504	H-11	D904	H-5
D505	H-13	D905	I-5
D506	I-14	D906	I-5
D507	H-13	D1201	G-6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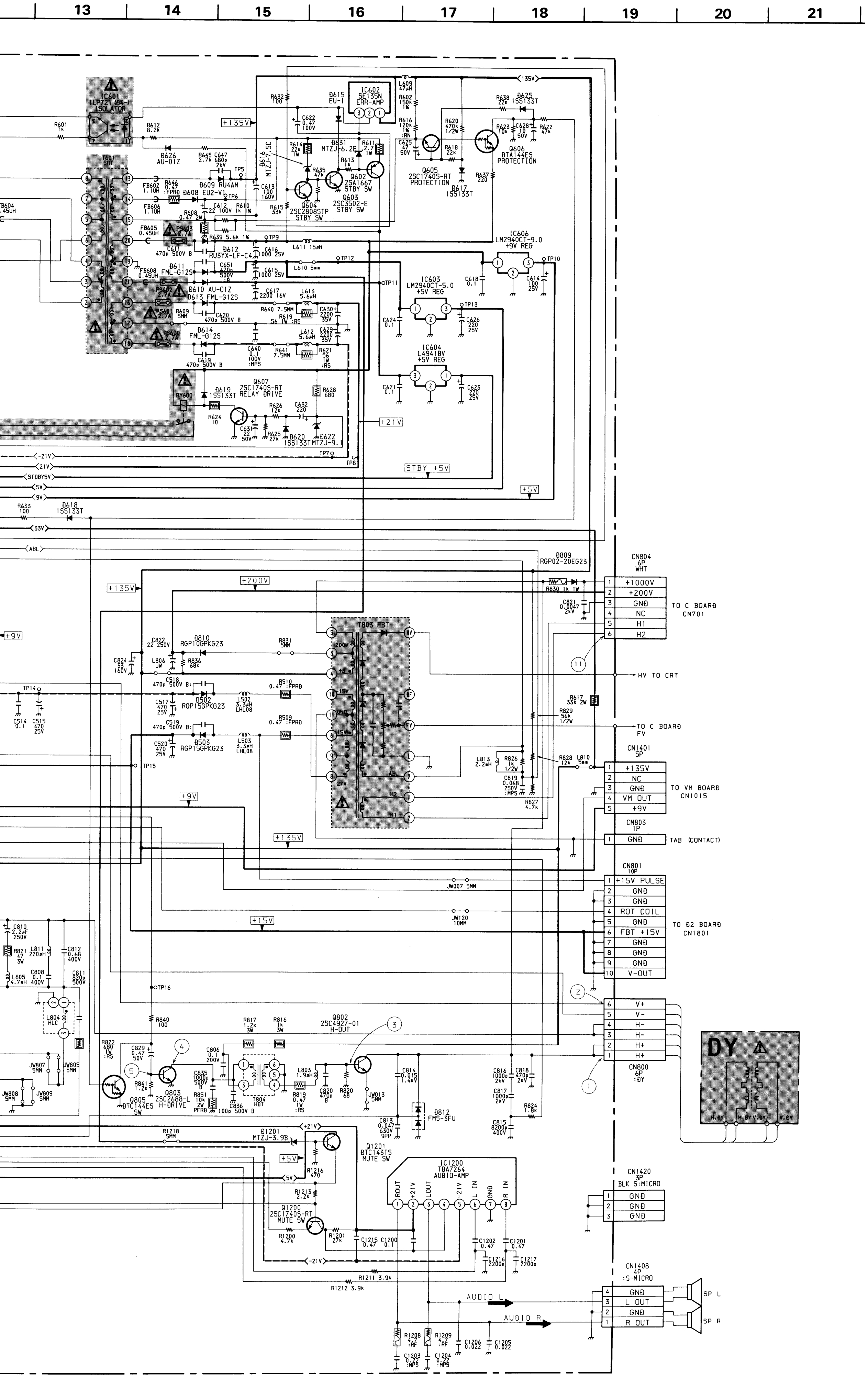
B-:SSBE3Ð<...>-Ð..-29X1
AC-IN 240-250V AC
CN603 4P
AC-IN
NC
NC
AC-IN
F601 5.0A 250V
S601 POWER
LF600 LFT
LF601 LFT
C683 0.22 300V
C684 0.22 300V
C600 2200p 250V
C635 0.22 300V
R630 8.2M 1W
R631 3.3 10W
R642 3.3 10W
C602 4700p 250V
C601 4700p 250V
D600 D4SB60L-F
R629 1M 1/2W
C636 2200p 250V
JW142 15MM
TO DGC
DGC
NC
DGC
CN601 3P
DGC CHK
DGC CHK
CN600 2P
THP600
R600 39k 3W
D601 EM1-V1
C603 330 400V
R647 0.1 1/2W :RF
Q601 2SC3852A 7V REG
R634 22
R603 10k 2W
C604 100 50V
D603 MTZJ-6.8B
C605 10 100V
FB600 1.1UH
IC600 STR-S6708 POWER-CONTROL
FB601 1.1UH
R606 JW 12.5MM
C607 220 25V
R627 0.68 1W
D607 EG-1Z
R607 12 1W :RS
C608 1500p 2kV E
R605 0.27 2W :RS
FB607 1.1UH
D
HV OUT
PIN OUT
POWER SUPPLY
CONTROL SW. AUDIO IN
Y-CHROMA IN
HEADPHONE IN
SIRCS RECEIVE. INDICATOR
CN902 50P
GND
GND
GND
GND
ROT COIL
V-OUT
NC
GND
E/W
V+OUT
H DRIVE
V-SYNC
HFBP
GND
EHT
ABL
PROT
DGC RELAY
GND
9V
33V
STBY 5V
AFC
SIRCS
SPKRL
STBY
GND
5V
SPKRR
GND
STBY LED
GND
GND
GND
GND
KEY 1
VM OUT
MUTE
H/P R
GND
H/P L
GND
RIN
LIN
VIN
GND
CIN
YIN
TO A BOARD CN001
-21V
+9V
+5V
L616 47μH
L615 22μH
JW898 5MM
AUDIO L
AUDIO R
⑫
⑬
EHT
R833 220k
R522 22k
R523 22k
D504 1SS133T
D505 MTZJ-3.6A
R524 4.7k
Q501 2SC1740S-RT SW
C522 10 50V
D506 1SS133T
D507 MTZJ-5.1B
C521 10 25V
R525 4.7k
Q502 2SA933S-RT SW
Q503 DTC144ES SW
C523 0.1
R526 2.2k
+SAW
TP18
R500 33k 1W
IC500 STV9379 VERTICAL OUTPUT
V+I/P
VCC
F.B.-PLS
VEE
OUT-PUT
VCC (OUT)
V-I/P
C510 220 50V
C507 2.2 50V
C511 0.33 63V
R505 1.5 :FPRD
D803 GP08D
R507 220 2W
R504 27k 1W
R506 5.6k 1W
C504 470p
C506 470 25V
C509 0.1
R508 1.5 2W :RS
C503 0.1 :MPS
C513 0.1 100V :MPS
R521 27k 1W
R527 4.7k 1W
HDRIVE
ROT COIL
R812 2.2k
R852 18k
FB800
C838 470p 500V
D807 RGP10GPK
R818 22 2W
R842 4.7k
R809 100k
C830 0.47 50V
R843 120k
C802 0.01
E/W
R803 3.9k
R805 10k
C801 0.022
R847 470k
R846 180k
C832 1 50V
R848 22k
D808 GP08D
R837 6.8k
D802 1SS133T
HFBP
R800 2.2k
JW009 5MM
R802 22k
R849 10k
C800 0.0047
R813 470 1W
R814 330
C804 0.1
⑧
Q801 2SC4793 PIN OUT
CN807 3P S:MICRO
RIGHT
CENTRE
H.CEN
D817 MTZJ-5.6B
D801 1SS133T
L809 47μH
C1207 100 16V
D800 1SS133T
C834 22 25V
⑩
R850 4.7k
R811 5MM (JW)
⑨
Q800 2SC1740S-RT PIN-OUT
Q1204 DTC143TS MUTE SW
C831 JW
IC800 LM393P PIN-CORRECTION
R1204 2.2k
C1214 100 16V
IC1201 TDA2822M HEADPHONE AMP
C1209 4.7 50V
C1218 220 16V
R1206 8.2k
R1205 8.2k
R1203 2.2k
C1208 4.7 50V
R1202 4.7 :FPRD
R1217 4.7k
Q1202 DTC114ES MUTE SW
Q1203 DTC143TS MUTE SW
D1202 JW
JW819
JW820
R835 22 3W
C906 10 50V
C910 JW
R907 75
C908 10 50V
D902 MTZJ-9.1
D903 MTZJ-9.1
D904 MTZJ-9.1
D905 MTZJ-9.1
D906 MTZJ-9.1
R902 39 1/2W
R901 39 1/2W
R922 100
R909 10k
STBY +5V
JW306 30MM
R910 2.7k
R911 5.6k
R912 10k
R913 22k
R914 47k
S902
S901
S900
C907 10 50V
L904 10μH
C911 10 50V
L903 10μH
C901 100p 500V
R919 47k
R921 47k
C913 100p 500V
R905 75
R906 75
Y/C-3
CN900
R
L
V
C902 0.022
C903 0.022
L902 10μH
L901 10μH
J900 HEADPHONES
TP20
R900 220
IC900 SBX1790-51 RECEIVER
R904 4.7
R923 390
Q900 2SC1740S-RT
D901 SLA-570KT3F
R908 47
C905 10 50V
C904 100 25V



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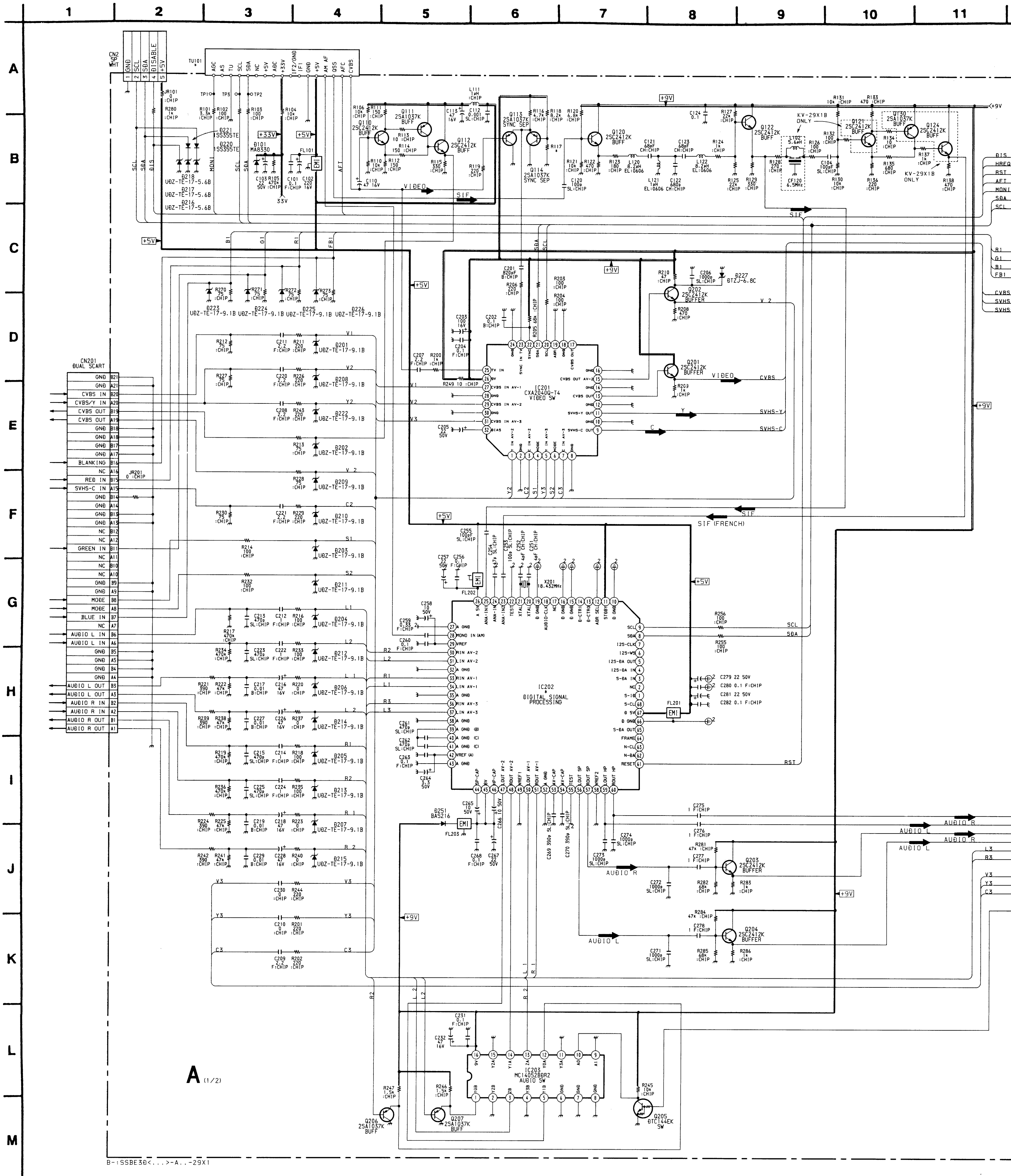
IC601 TLP721 (D4-) ISOLATOR
R601 1k
R612 8.2k
T601 SRT
FB604 0.45UH
D626 AU-01Z
R645 2.7k
C647 680p 2kV
TP5
FB602 1.1UH
R646 0.47 :FPRD
D608 EU2-V1
D609 RU4AM
TP6
C612 22 100V
R610 1k 1%
FB606 1.1UH
R608 0.47 2W
FB605 0.45UH
PS603 2.7A
C611 470p 500V B
R639 5.6k 1%
TP9
D612 RU3YX-LF-C4
C616 1000 25V
L611 15μH
FB608 0.45UH
D611 FML-G12S
C651 470p 500V B
C615 1000 25V
L610 5mm
TP12
PS602 2.7A
D610 AU-01Z
D613 FML-G12S
C617 2200 16V
L613 5.6μH
C630 2200 35V
PS601 2.7A
R609 5MM
C620 470p 500V B
R640 7.5MM
R619 56 1W :RS
PS600 2.7A
D614 FML-G12S
L612 5.6μH
C629 2200 35V
C640 0.1 100V :MPS
R641 7.5MM
R621 56 1W :RS
C619 470p 500V B
RY600
D619 1SS133T
Q607 2SC1740S-RT RELAY DRIVE
R628 680
R624 10
R626 12k
C632 220
C631 22 50V
R625 27k
D620 1SS133T
D622 MTZJ-9.1
TP7
TP8
+135V
R632 100
C622 0.47 100V
D615 EU-1
IC602 SE135N ERR-AMP
D616 MTZJ-7.5C
R614 22k 1W
D631 MTZJ-6.2B
R611 2.7 1W
R635 47k
R613 1k
Q602 2SA1667 STBY SW
C613 100 160V
R615 33k
Q604 2SC2808STP STBY SW
Q603 2SC3502-E STBY SW
L609 47μH
R602 150k 1%
R616 120k 1% :RN
C625 47 50V
R620 470k 1/2W
R618 22k
Q605 2SC1740S-RT PROTECTION
R638 22k
D625 1SS133T
R623 10k
C628 10 50V
R622 47k
Q606 DTA144ES PROTECTION
R637 220
D617 1SS133T
IC606 LM2940CT-9.0 +9V REG
TP10
C618 0.1
C614 100 25V
TP11
IC603 LM2940CT-5.0 +5V REG
TP13
C624 0.1
C626 220 25V
IC604 L4941BV +5V REG
C621 0.1
C623 220 25V
+21V
STBY +5V
+5V
-21V
21V
STBYSV
5V
9V
R633 100
D618 1SS133T
33V
ABL
D809 RGP02-20EG23
CN804 6P WHT
+1000V
+200V
GND
NC
H1
H2
TO C BOARD CN701
R830 1k 1W
C821 0.0047 2kV
+135V
+200V
T803 FBT
HV
200V
+B
15V
GND
15V
27V
ABL
H2
H1
BF
FV
E
C822 22 250V
D810 RGP10GPKG23
R831 5MM
C824 33 160V
L806 JW
R836 68k
HV TO CRT
+9V
C518 470p 500V B
D502 RGP15GPKG23
L502 3.3μH LHL08
R510 0.47 :FPRD
TP14
C517 470 25V
C514 0.1
C515 470 25V
C519 470p 500V B
D503 RGP15GPKG23
L503 3.3μH LHL08
R509 0.47 :FPRD
C520 470 25V
TP15
R617 33k 2W
R829 56k 1/2W
TO C BOARD FV
CN1401 5P
+135V
NC
GND
VM OUT
+9V
TO VM BOARD CN1015
L813 2.2mH
R826 1k 1/2W
C819 0.068 250V :MPS
R828 12k
L810 5MM
R827 4.7k
CN803 1P
GND
TAB (CONTACT)
+9V
+135V
CN801 10P
+15V PULSE
GND
GND
ROT COIL
GND
FBT +15V
GND
GND
GND
V-OUT
TO D2 BOARD CN1801
JW007 5MM
JW120 10MM
+15V
C810 2.2μF 250V
R821 47 3W
L811 220μH
C812 0.68 400V
L805 4.7mH
C808 0.1 400V
C811 820p 500V
L804 HLC
TP16
R840 100
JW807 5MM
JW805 5MM
JW808 5MM
JW809 5MM
R822 680 1W :RS
C829 0.47 50V
R841 1.2k
Q805 DTC144ES SW
Q803 2SC2688-L H-DRIVE
C806 0.1 200V
C835 1000p 500V B
R851 10k 2W PFRD
C836 100p 500V B
T804 HDT
R817 1.2k 3W
R816 1k 3W
Q802 2SC4927-01 H-OUT
L803 1.9mH
R819 0.47 1W :RS
C820 470p B
R820 68
C814 0.015 1.4kV
JW013 5MM
D812 FMS-3FU
C813 0.047 630V 9PP
C816 1000p 2kV
C818 470p 2kV
C817 1000p 2kV
R824 1.8k
C815 8200p 400V
V+
V-
H-
H-
H+
H+
CN800 6P :DY
DY
H.DY
H.DY
V.DY
V.DY
R1218 5MM
D1201 MTZJ-3.9B
+21V
Q1201 DTC143TS MUTE SW
+5V
5V
R1216 470
R1213 2.2k
Q1200 2SC1740S-RT MUTE SW
R1200 4.7k
R1201 27k
C1215 0.47
C1200 0.1
-21V
IC1200 TDA7264 AUDIO-AMP
ROUT
-21V
LOUT
+21V
L IN
GND
R IN
C1202 0.47
C1201 0.47
C1216 2200p
C1217 2200p
R1211 3.9k
R1212 3.9k
CN1420 3P BLK S-MICRO
GND
GND
GND
AUDIO L
AUDIO R
CN1408 4P :S-MICRO
GND
L OUT
GND
R OUT
SP L
SP R
R1208 4.7 :RF
R1209 4.7 :RF
C1206 0.022
C1205 0.022
C1203 0.22 :MPS
C1204 0.22 :MPS

D BOARD
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q501	-0.1	0.2	-
Q502	0.1	-5.8	-
Q503	-5.8	-12.0	-12.0
Q602	72.0	7.5	72.7
Q603	0	72.0	-
Q604	0.7	-	-
Q605	0.5	-	0.3
Q606	-	-	12.0
Q607	-	12.0	-
Q800	0.2	3.1	-
Q801	0.3	17.0	-
Q802	-0.2	143.3	-
Q803	-0.6	99.8	-
Q805	-	3.6	-
Q900	-	5.4	-
Q1200	2.9	21.5	4.6
Q1201	3.4	5.0	3.0
Q1202	2.8	-	-

D BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC500	1	1.5
	2	15.0
	3	-12.3
	4	-14.0
	5	0.1
	6	15.2
	7	1.4
IC600	1	170.0
	2	-62.4
	3	-62.6
	4	-62.2
	5	-62.0
	6	-62.6
	7	-62.4
	8	-62.0
	9	-58.0
IC601	1	64.3
	2	63.0
	3	-62.5
	4	-58.6
IC602	1	135.0
	2	63.2
	3	-0.1
IC800	3	0.9
	5	1.5
	6	2.0
	7	0.2
	8	9.0
IC1200	2	21.7
	4	21.5
	5	-21.7
IC1201	1	4.0
	2	9.0
	3	4.0
	5	0.5
	8	0.5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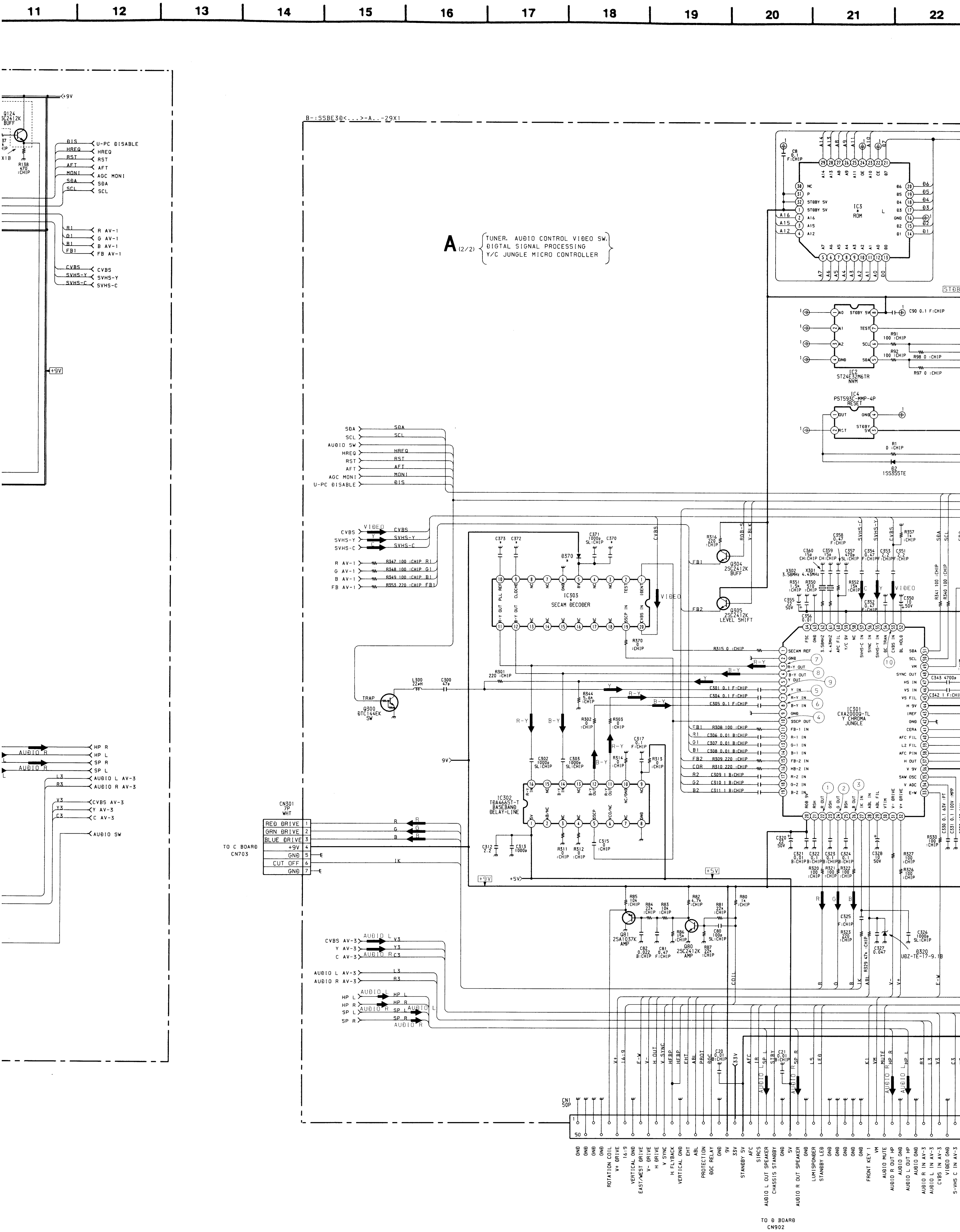
N
O
P
CN2 5P WHT
GND
SCL
SDA
DISABLE
+5V
TU101
AGC
AS
TU
SCL
SDA
NC
+5V
ADC
33V
IF2/GND
IF1
GND
AM AF
QSS
AFC
CVBS
D101 MA8330
FL101
Q110 2SC2412K BUFF
Q111 2SA1037K BUFF
Q112 2SC2412K BUFF
Q113 2SA1037K SYNC SEP
Q114 2SA1037K SYNC SEP
Q120 2SC2412K BUFF
Q121 2SC2412K BUFF
Q122 2SC2412K BUFF
Q124 2SC2412K BUFF
Q130 2SA1037K BUFF
KV-29X1B ONLY
CF120 6.5MHz
D218 UDZ-TE-17-5.6B
D217 UDZ-TE-17-5.6B
D216 UDZ-TE-17-5.6B
D221 1SS355TE
D220 1SS355TE
VIDEO
SIF
CN201 DUAL SCART
GND
CVBS IN
CVBS/Y IN
CVBS OUT
BLANKING
NC
RED IN
SVHS-C IN
GREEN IN
MODE
BLUE IN
AUDIO L IN
AUDIO L OUT
AUDIO R IN
AUDIO R OUT
JR201 0 :CHIP
IC201 CXA2040Q-T4 VIDEO SW
Q202 2SC2412K BUFFER
Q201 2SC2412K BUFFER
D227 DTZJ-6.8C
CVBS
SVHS-Y
SVHS-C
SIF (FRENCH)
IC202 DIGITAL SIGNAL PROCESSING
X201 18.432MHz
FL202
FL201
FL203
D251 BAS216
SCL
SDA
RST
AUDIO R
AUDIO L
Q203 2SC2412K BUFFER
Q204 2SC2412K BUFFER
IC203 MC14052BDR2 AUDIO SW
Q206 2SA1037K BUFF
Q207 2SA1037K BUFF
Q205 DTC144EK SW
+5V
+9V
+33V
A (1/2)
B-:SSBE30<...>-A..-29X1

A BOARD * MARK

Ref. No. \ Model	29X1A	29X1B	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
C370	—	2.2UF	2.2UF	2.2UF	2.2UF	—	2.2UF	—
C372	—	0.1UF	0.1UF	0.1UF	0.1UF	—	0.1UF	—
C373	—	0.22UF	0.22UF	0.22UF	0.22UF	—	0.22UF	—
D370	—	BAS216	BAS216	BAS216	BAS216	—	BAS216	—
IC3	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101	TMS27PC010A-15FML	TMS27PC010A-15FMBW101
IC202	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15
IC303	—	TDA8395T	TDA8395T	TDA8395T	TDA8395T	—	TDA8395T	—
R13	150	—	150	150	150	150	150	150
R14	150	—	150	150	150	150	150	150
R15	150	—	150	150	150	150	150	150
R16	100	—	100	100	100	100	100	100
R17	100	—	100	100	100	100	100	100
R117	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	2.0K
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)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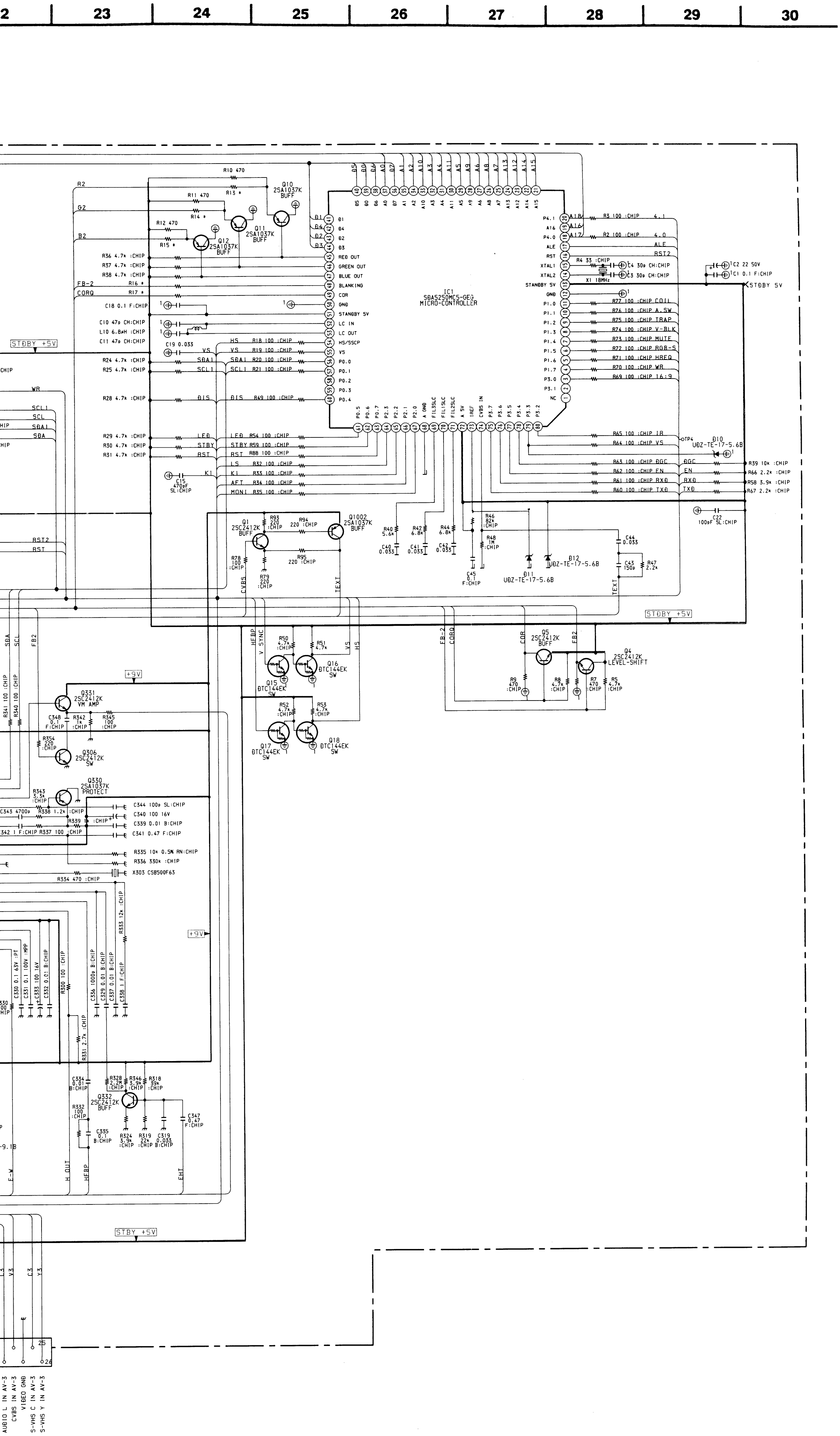
A (2/2)
TUNER, AUDIO CONTROL VIDEO SW,
DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER
B-:SSBE30<...>-A..-29X1
Q124 2SC2412K BUFF
R138 470 :CHIP
+9V
U-PC DISABLE
HREQ
RST
AFT
AGC MONI
SDA
SCL
R AV-1
G AV-1
B AV-1
FB AV-1
CVBS
SVHS-Y
SVHS-C
HP R
HP L
SP R
SP L
AUDIO L AV-3
AUDIO R AV-3
CVBS AV-3
Y AV-3
C AV-3
AUDIO SW
IC3 ROM
C8 0.1 F:CHIP
STBY 5V
IC2 ST24E32M6TR NVM
C90 0.1 F:CHIP
R91 100 :CHIP
R92 100 :CHIP
R98 0 :CHIP
R97 0 :CHIP
IC4 PST593C-MMP-4P RESET
R1 0 :CHIP
D2 1SS355TE
IC303 SECAM DECODER
D370
C373
C372
C371 1000p SL:CHIP
C370
R370 0 :CHIP
Q304 2SC2412K BUFF
Q305 2SC2412K LEVEL SHIFT
R316 220 :CHIP
RGB-S
V-BLK
FB1
FB2
VIDEO
X302 3.58MHz
X301 4.43MHz
IC301 CXA2000Q-TL Y CHROMA JUNGLE
R315 0 :CHIP
R301 220 :CHIP
L300 22μH
C300 47p
Q300 DTC144EK SW
TRAP
R344 5.6k :CHIP
R302 0 :CHIP
R303 0 :CHIP
C317 0.1 F:CHIP
R314 0 :CHIP
R313 0 :CHIP
IC302 TDA4665T-T BASEBAND DELAY-LINE
C302 1000p SL:CHIP
C303 1000p SL:CHIP
C312 2.2
C313 1000p
R311 0 :CHIP
R312 0 :CHIP
C315 :CHIP
9V
+9V
+5V
CN301 7P WHT
RED DRIVE
GRN DRIVE
BLUE DRIVE
+9V
GND
CUT OFF
GND
TO C BOARD CN703
IK
R85 10k :CHIP
R84 22k :CHIP
R83 10k :CHIP
R82 4.7k :CHIP
R81 22k :CHIP
R80 1k :CHIP
Q81 2SA1037K AMP
Q80 2SC2412K AMP
C82 0.022 B:CHIP
C81 0.47 F:CHIP
R86 15k :CHIP
C80 100p SL:CHIP
R87 22k :CHIP
C320 22 50V
C328 10 50V
R327 100 :CHIP
R326 100 :CHIP
R330 100 :CHIP
C325 1 F:CHIP
R323 220 :CHIP
C327 0.047
C326 1000p SL:CHIP
D320 UDZ-TE-17-9.1B
COIL
C20 0.01 B:CHIP
C21 0.01 B:CHIP
CN1 50P
GND
GND
GND
GND
ROTATION COIL
V+ DRIVE
16:9
VERTICAL GND
EAST/WEST DRIVE
V- DRIVE
H DRIVE
V SYNC
H FLYBACK
VERTICAL GND
EHT
ABL
PROTECTION
DGC RELAY
GND
9V
33V
STANDBY 5V
AFC
SIRCS
AUDIO L OUT SPEAKER
CHASSIS STANDBY
GND
5V
AUDIO R OUT SPEAKER
GND
LUMISPONDER
STANDBY LED
GND
GND
GND
GND
FRONT KEY 1
VM
AUDIO MUTE
AUDIO R OUT HP
AUDIO GND
AUDIO L OUT HP
AUDIO GND
AUDIO R IN AV-3
AUDIO L IN AV-3
CVBS IN AV-3
VIDEO GND
S-VHS-C IN AV-3
TO D BOARD CN902


22
23
24
25
26
27
28
29
30
IC1
SDA5250MC5-GEG
MICRO-CONTROLLER
Q10 2SA1037K BUFF
Q11 2SA1037K BUFF
Q12 2SA1037K BUFF
Q1 2SC2412K BUFF
Q1002 2SA1037K BUFF
Q5 2SC2412K BUFF
Q4 2SC2412K LEVEL-SHIFT
Q15 DTC144EK SW
Q16 DTC144EK SW
Q17 DTC144EK SW
Q18 DTC144EK SW
Q331 2SC2412K VM AMP
Q306 2SC2412K SW
Q330 2SA1037K PROTECT
Q332 2SC2412K BUFF
D10 UDZ-TE-17-5.6B
D11 UDZ-TE-17-5.6B
D12 UDZ-TE-17-5.6B
X1 18MHz
X303 CSB500F63
STBY +5V
STBY 5V
+9V
AUDIO L IN AV-3
CVBS IN AV-3
VIDEO GND
S-VHS C IN AV-3
S-VHS Y IN AV-3

A (1/2) BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC201	13	4.4
	15	4.4
	20	3.5
	21	2.7
	22	4.9
	23	4.4
	24	0
	25	4.4
	26	8.8
	32	4.4
IC202	4	2.8
	6-7	0.1
	8	3.0
	9	3.6
	11	4.7
	13	4.7
	20-21	2.4
	23	0.2
	25	1.5
	26	4.8
	28	3.8
	29	2.6
	39-42	3.8
	44	7.1
	45	8.0
	46	7.1
	47-48	3.8
	53-54	3.8

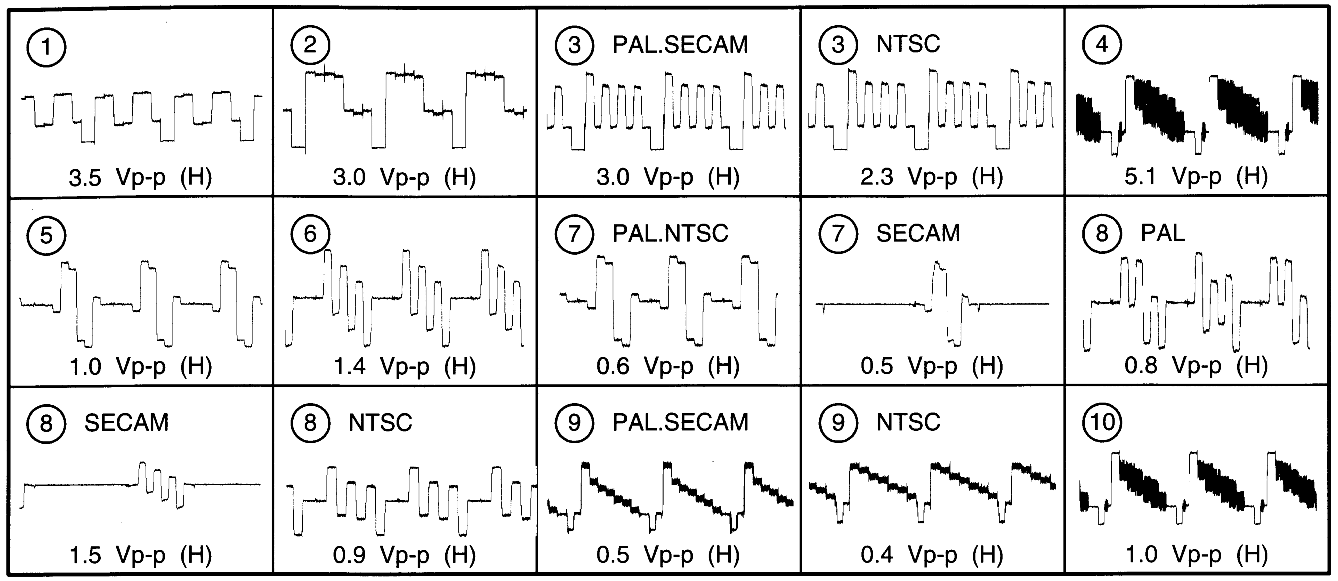
A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q1	3.7	4.8	3.1
Q4	0.1	4.8	-
Q5	0.7	4.8	4.0
Q15	-	4.3	-
Q16	4.3	0.2	-
Q17	0.4	3.5	-
Q18	3.5	0.7	-
Q80	2.6	2.2	-
Q81	2.4	-	3.0
Q304	-	4.8	-
Q305	-	4.8	-
Q330	4.5	-	5.1
Q331	6.3	8.8	5.7
Q332	3.1	8.8	2.5
Q1001	4.4	-	-

A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q110	1.8	8.2	1.2
Q112	1.5	8.8	0.8
Q113	1.8	-	-
Q114	5.4	6.0	-
Q120	84.3	8.8	3.7
Q121	1.5	5.4	0.9
Q122	5.4	8.8	4.7
Q124	-	8.8	-
Q201	4.4	8.8	3.7
Q202	4.4	8.8	3.7

WAVEFORMS A BOARD



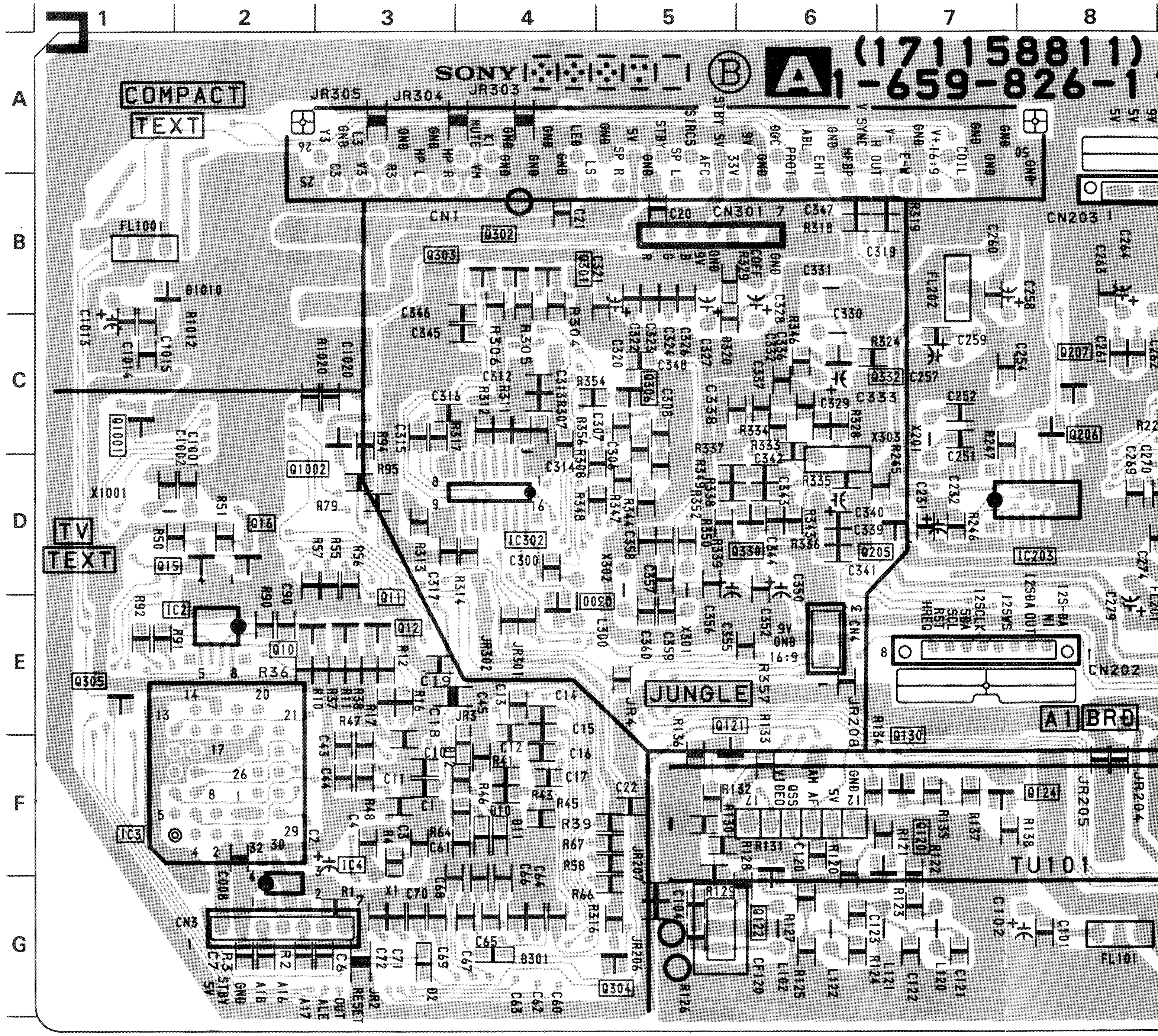
A (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table

Ref No	Pin No	Voltage (V)
IC1	2	3.6
	3-4	4.8
	5	0.5
	7	4.8
	9	4.8
	11	2.4
	13	4.8
	14-15	2.3
	16-17	4.8
	48	4.0
	51	4.8
	52-53	2.4
	54	0.7
	55	0.2
	56-57	4.8
	58	2.8
	59	3.5
	60	2.4
	62	0.7
	63	4.4
	65	4.8
	66	2.1
	67	2.0
	69-71	2.3
	72	4.8
	73	1.5
	74	1.2
	75-77	4.8
	79	0.2
	80	4.8
IC2	5-8	4.8
IC3	1	4.8
	31-32	4.8
IC4	1	4.8
	3	4.8
IC301	1	1.5
	3-4	5.6
IC301	5	3.6
	6	5.0
	7-8	5.4
	10	0.6
	12-14	5.4
	16	4.0
	17-19	5.4
	20	8.8
	22-23	2.2
	24	2.0
	25	2.4
	26	2.0
	27	4.0
	28	6.6
	29	8.8
	31-33	3.0
	34	4.0
	35	4.6
	36	8.8
	37	3.1
	38	3.4
	39	5.3
	40	4.2
	41	2.3
	43	1.7
	44	8.8
	45	2.5
	46	3.9
	47	3.0
	48	4.4
	49	6.3
	50-51	0.1
	53	3.9
	54	5.0
	55-56	4.2
	58-59	8.8
	60	5.3
IC301	61	5.0
	62	7.6
IC302	1	4.8
	5	0.7
	9	4.8
	11-12	3.0
	14	1.3
	16	1.3
IC303	5	8.0
	3.2	10
	11	5.6
	0	19
	20	3.7
	4	0.2
	5	0.7
IC1001	4	0.2
	5	0.7
	6	1.7
	7	1.8
	10	0.4
	11-12	4.8
	16	4.8
	17	0
	21	4.8
	23	3.0
	25	4.8
	56	0
	61	1.3
	62-63	1.4
	64	0
	66	4.6
	67	4.7
	68	4.0

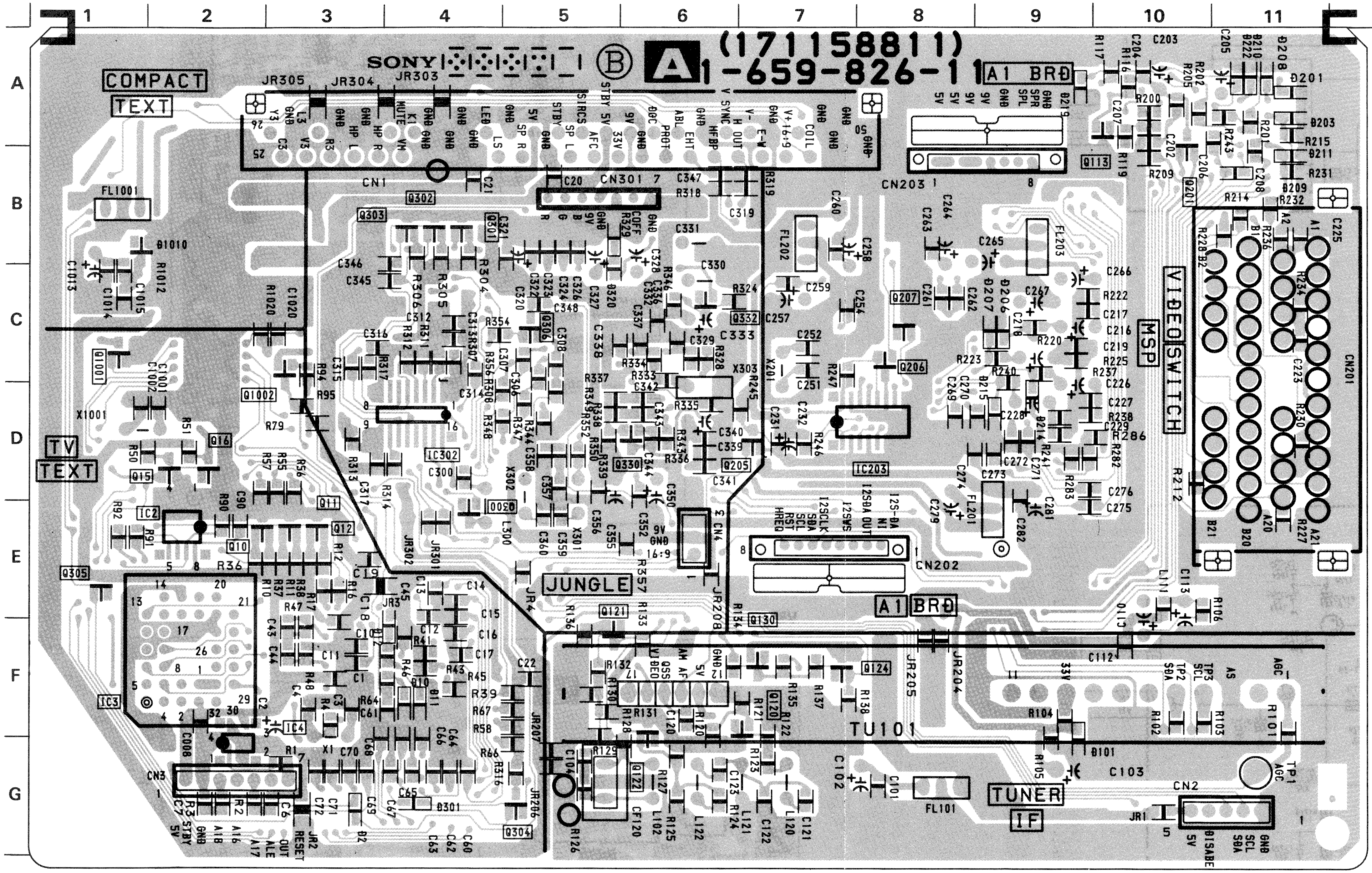
A [TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING Y/C JUNGLE MICRO CONTROLLER]

A Board <Conductor Side>


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
SONY
(171158811)
A 1-659-826-1
COMPACT TEXT
TV TEXT
JUNGLE
A1 BRD
CN1
CN301
CN202
CN203
CN3
CN4
TU101
IC2
IC3
IC4
IC302
IC203
FL1001
FL101
FL202
X1001
X301
X302
X303
JR303
JR304
JR305

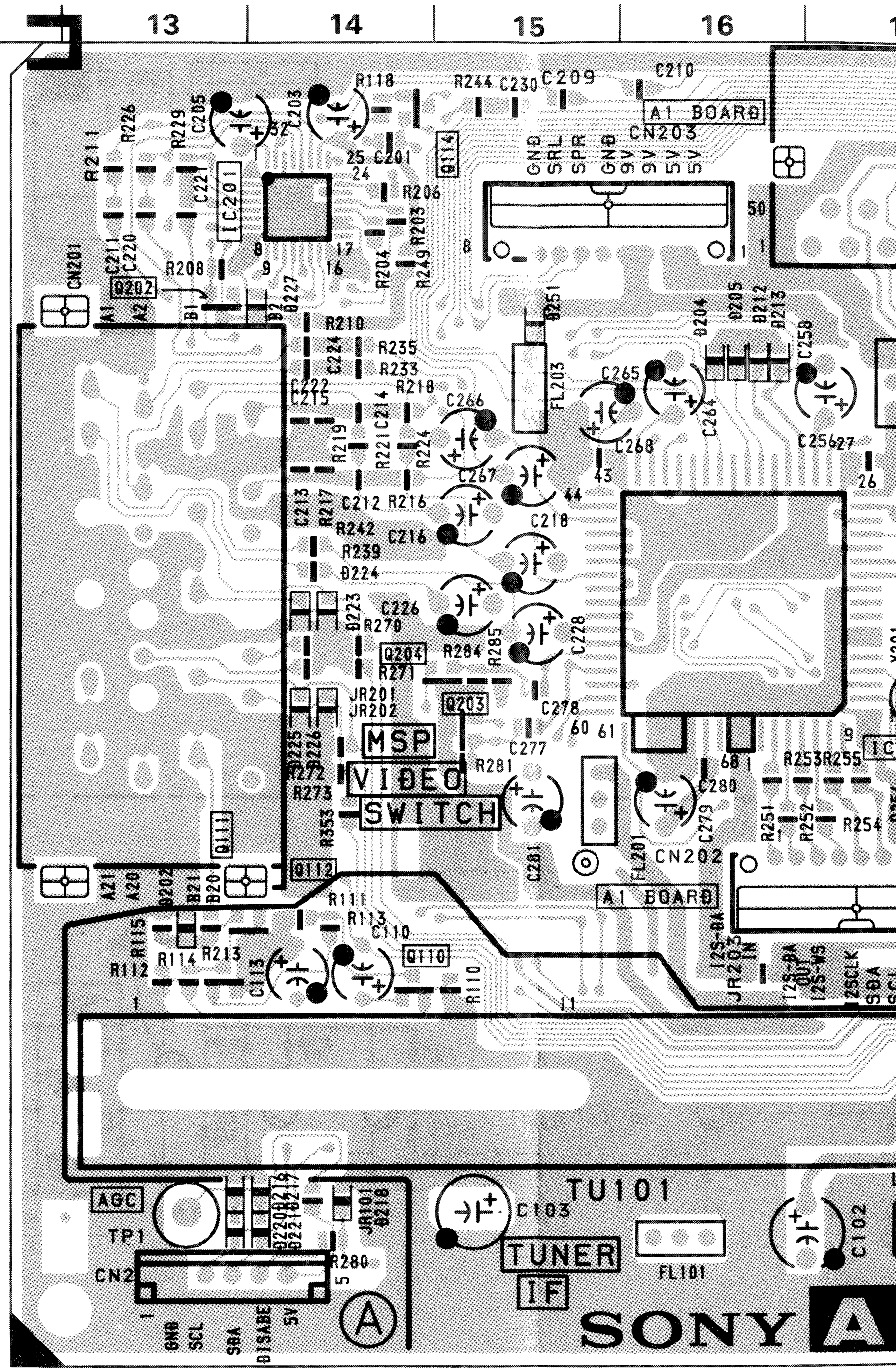
A TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER

A Board <Conductor Side>



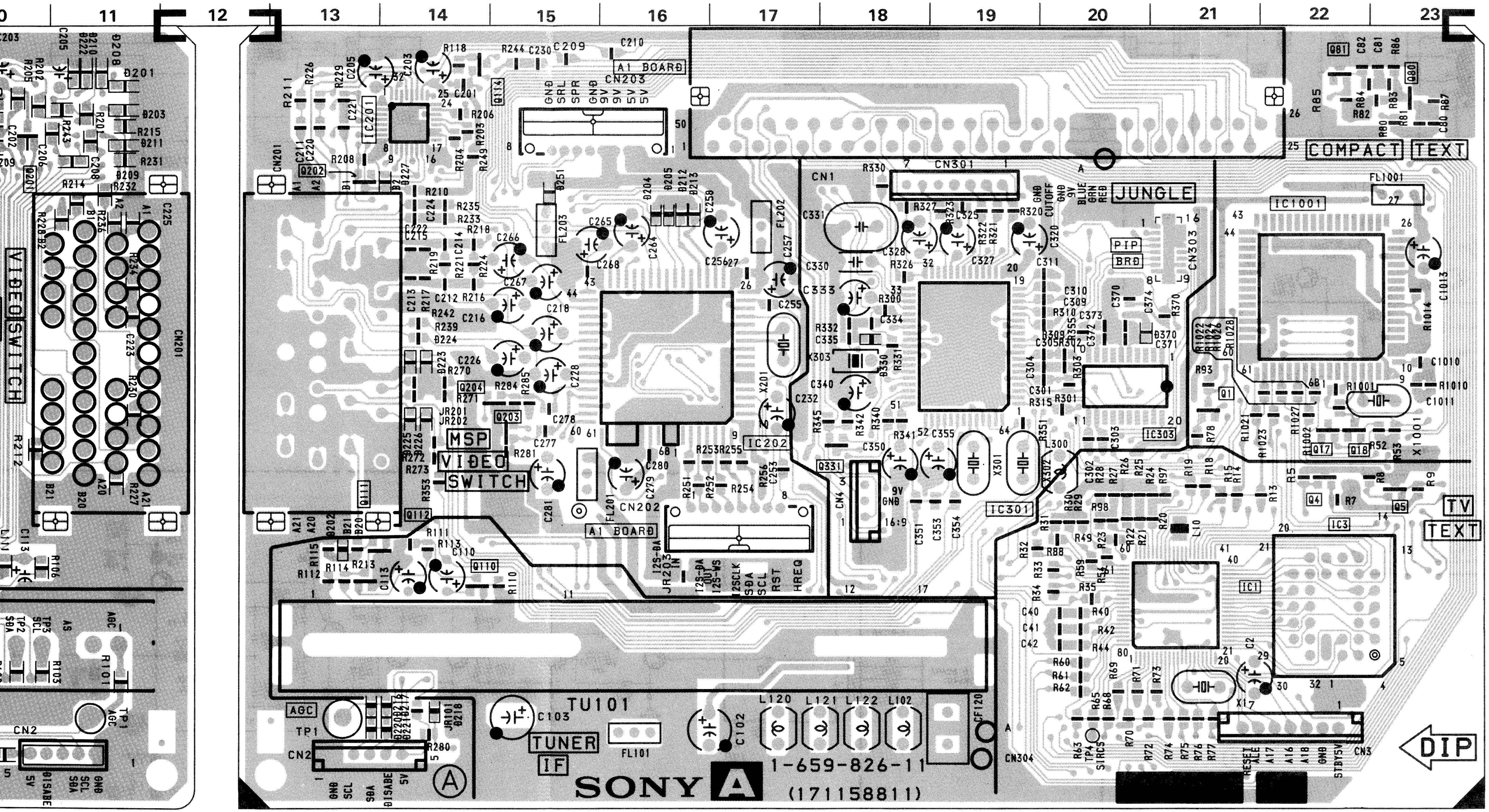
1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G
SONY
(171158811)
A 1-659-826-11
COMPACT TEXT
TV TEXT
A1 BRD
CN1
CN301
CN202
CN203
CN201
CN2
CN3
CN4
MSP VIDEO SWITCH
JUNGLE
TU101
TUNER IF
IC2
IC3
IC4
IC203
IC302
X1001
X301
X302
X303
FL1001
FL101
FL201
FL202
FL203

A Board <Component Side>



12 13 14 15 16
IC201
CN201
CN202
CN203
A1 BOARD
MSP VIDEO SWITCH
TU101
TUNER IF
AGC
TP1
CN2
FL101
FL201
FL203
SONY A

A Board <Component Side>



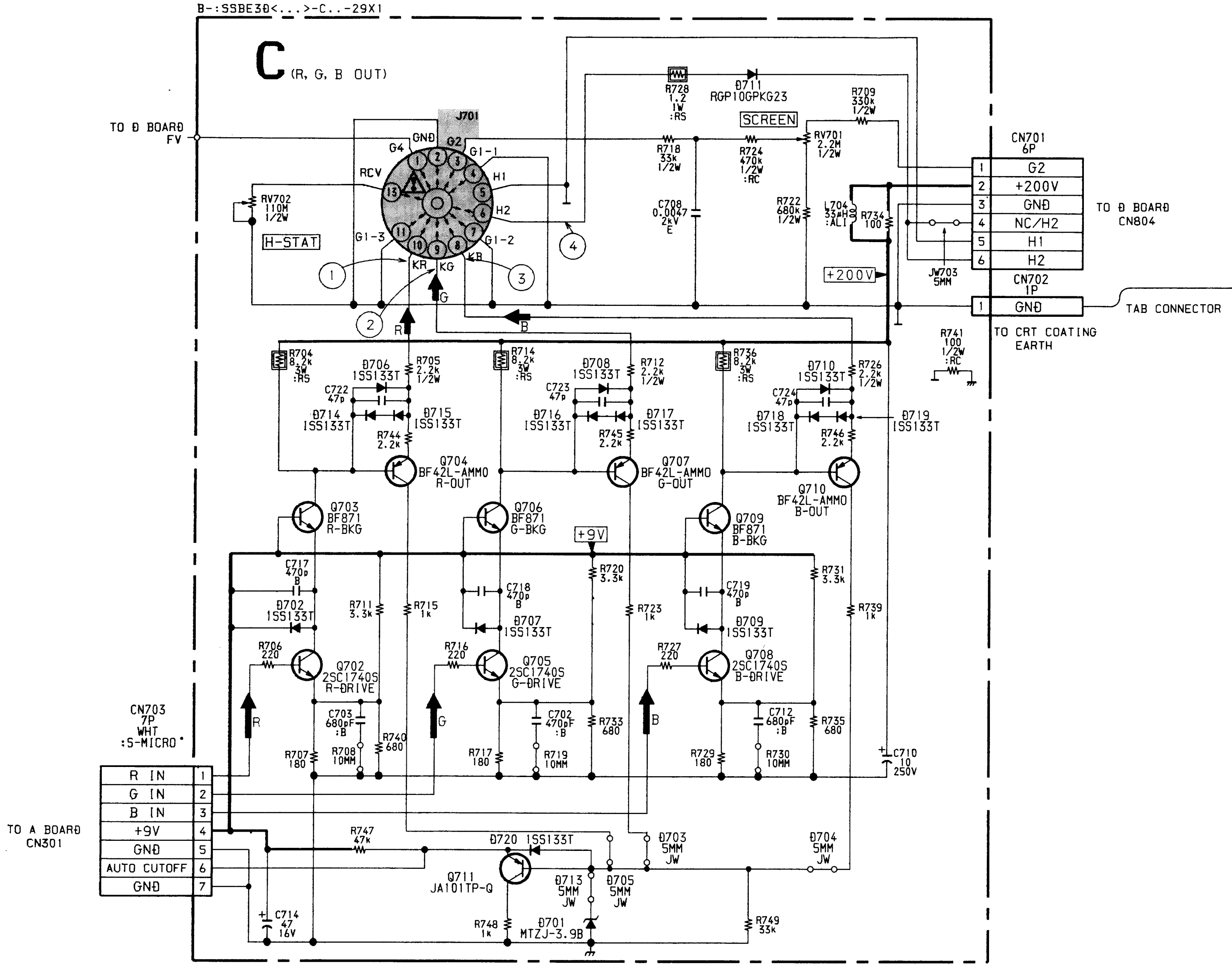
11
12
13
14
15
16
17
18
19
20
21
22
23
VIDEO SWITCH
CN201
A1 BOARD
CN203
GND SRL SPR GND 9V 9V 5V 5V
CN301
CN1
COMPACT
TEXT
JUNGLE
GND CUTOFF GND 9V BLUE GRN RED
PIP
BRD
CN303
IC1001
FL1001
IC201
IC202
IC203
IC301
IC303
IC3
IC1
MSP
VIDEO
SWITCH
CN202
A1 BOARD
I2S-DA OUT
I2S-WS
I2SCLK
SDA
SCL
RST
HREQ
JR203
I2S-DA IN
CN4
9V
GND
16:9
X301
X302
X303
X1001
X1
TV
TEXT
CN304
TP4
SIRCS
RESET
ALE
A17
A16
A18
GND
STBYSW
CN3
DIP
TU101
TUNER
IF
AGC
TP1
CN2
GND SCL SDA DISABE 5V
L120
L121
L122
L102
CF120
FL101
C103
C102
SONY
A
1-659-826-11
(171158811)

A BOARD

IC	
IC1	F-21
IC2	E-2
IC3	F-2
IC4	G-2
IC201	A-14
IC202	C-16
IC203	D-8
IC301	C-19
IC302	D-4
IC303	D-21

TRANSISTOR	
Q1	D-21
Q4	E-22
Q5	E-23
Q10	E-2
Q11	E-3
Q15	D-2
Q16	D-2
Q17	D-22
Q18	D-23
Q80	A-23
Q81	A-22
Q110	F-14
Q111	E-14
Q112	E-14
Q113	A-10
Q114	A-14
Q120	F-7
Q121	F-5
Q122	F-6
Q124	F-7
Q130	F-7
Q201	B-10
Q202	B-13
Q203	D-15
Q204	D-15
Q205	D-7
Q206	C-8
Q207	C-8
Q300	E-4
Q304	G-5
Q305	E-1
Q306	C-5
Q330	D-6
Q331	D-18
Q332	C-6
Q1002	C-3

DIODE	
D2	G-3
D10	F-10
D11	F-10
D12	F-4
D101	F-9
D201	A-11
D202	E-13
D203	A-11
D204	B-16
D205	B-16
D206	C-9
D207	C-9
D208	A-11
D209	B-11
D210	A-11
D211	B-11
D212	B-16
D213	B-16
D214	D-9
D215	D-9
D216	G-14
D217	G-14
D218	G-14
D220	G-14
D221	D-14
D222	D-14
D223	D-14
D224	D-14
D225	D-14
D226	D-14
D227	B14
D251	B-15
D320	C-5
D370	C-21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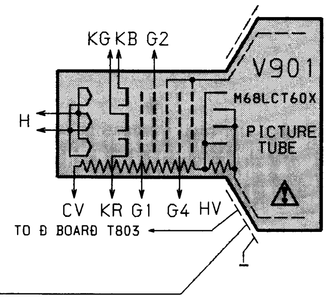
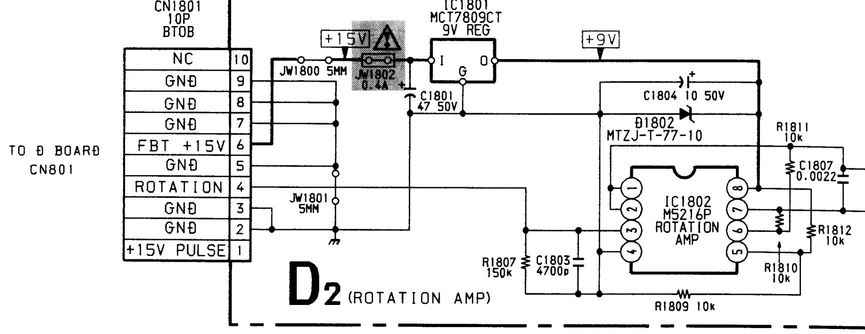
C (R, G, B OUT)
TO D BOARD FV
J701
G4 GND G2 G1-1 H1 H2 G1-2 KB KG KR G1-3 RCV
RV702 110M 1/2W
H-STAT
R728 1.2 1W :RS
D711 RGP10GPKG23
R718 33k 1/2W
R724 470k 1/2W :RC
SCREEN
R709 330k 1/2W
RV701 2.2M 1/2W
C708 0.0047 2kV E
R722 680k 1/2W
L704 33µH :AL1
R734 100
CN701 6P
G2
+200V
GND
NC/H2
H1
H2
TO D BOARD CN804
JW703 5MM
+200V
CN702 1P
GND
TO CRT COATING EARTH
TAB CONNECTOR
R741 100 1/2W :RC
R704 8.2k 3W :RS
D706 1SS133T
R705 2.2k 1/2W
C722 47p
D714 1SS133T
D715 1SS133T
R744 2.2k
Q704 BF42L-AMMO R-OUT
R714 8.2k 3W :RS
D708 1SS133T
R712 2.2k 1/2W
C723 47p
D716 1SS133T
D717 1SS133T
R745 2.2k
Q707 BF42L-AMMO G-OUT
R736 8.2k 3W :RS
D710 1SS133T
R726 2.2k 1/2W
C724 47p
D718 1SS133T
D719 1SS133T
R746 2.2k
Q710 BF42L-AMMO B-OUT
Q703 BF871 R-BKG
Q706 BF871 G-BKG
Q709 BF871 B-BKG
+9V
C717 470p B
D702 1SS133T
R711 3.3k
R715 1k
R706 220
Q702 2SC1740S R-DRIVE
C703 680pF :B
R707 180
R708 10MM
R740 680
C718 470p B
D707 1SS133T
R716 220
Q705 2SC1740S G-DRIVE
R717 180
C702 470pF :B
R719 10MM
R720 3.3k
R723 1k
R733 680
C719 470p B
D709 1SS133T
R727 220
Q708 2SC1740S B-DRIVE
R729 180
C712 680pF :B
R730 10MM
R731 3.3k
R739 1k
R735 680
C710 10 250V
CN703 7P WHT :S-MICRO
R IN
G IN
B IN
+9V
GND
AUTO CUTOFF
GND
TO A BOARD CN301
R747 47k
D720 1SS133T
Q711 JA101TP-Q
D713 5MM JW
D705 5MM JW
D703 5MM JW
D704 5MM JW
C714 47 16V
R748 1k
D701 MTZJ-3.9B
R749 33k
1 2 3 4 5 6 7 8 9 10 11 12 13
R G B


KG KB G2
V901
M68LCT60X
PICTURE TUBE
H
CV KR G1 G4 HV
TO D BOARD T803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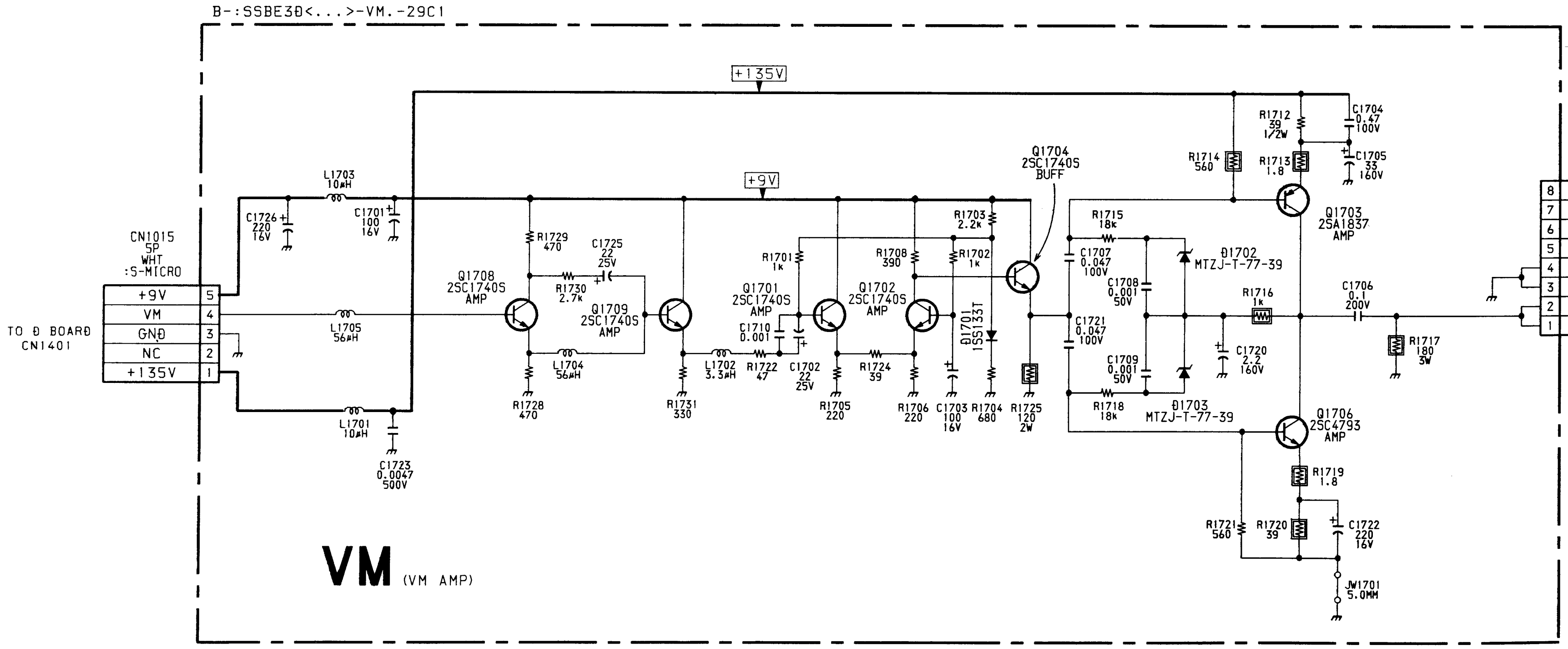
CN1801 10P BTOB
NC
GND
GND
GND
FBT +15V
GND
ROTATION
GND
GND
+15V PULSE
TO D BOARD CN801
+15V
JW1800 5MM
JW1802 0.4A
IC1801 MCT7809CT 9V REG
+9V
C1801 47 50V
C1804 10 50V
D1802 MTZJ-T-77-10
R1811 10k
C1807 0.0022
JW1801 5MM
IC1802 M5216P ROTATION AMP
R1812 10k
R1807 150k
C1803 4700p
R1810 10k
R1809 10k
D2 (ROTATION AMP)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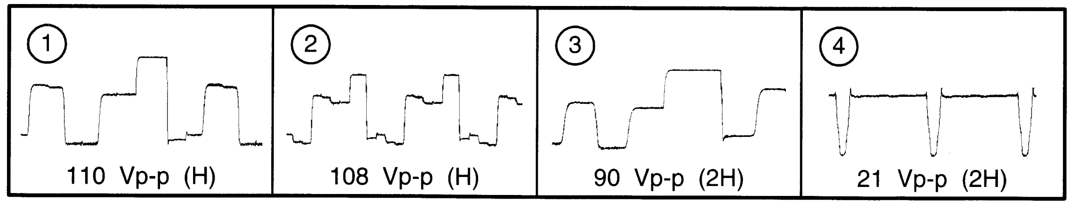
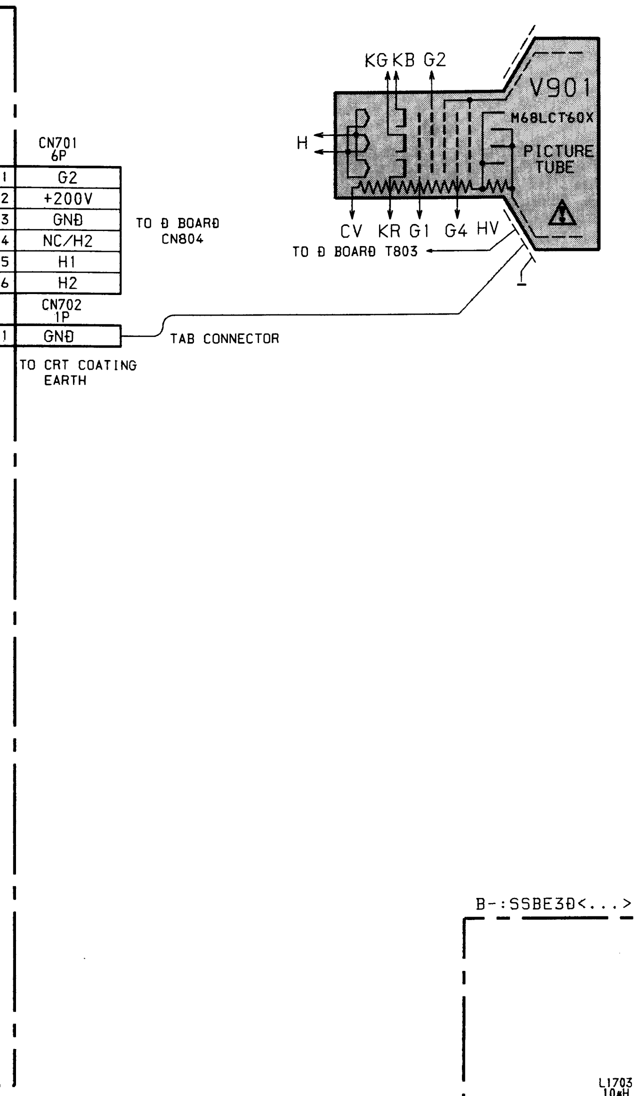
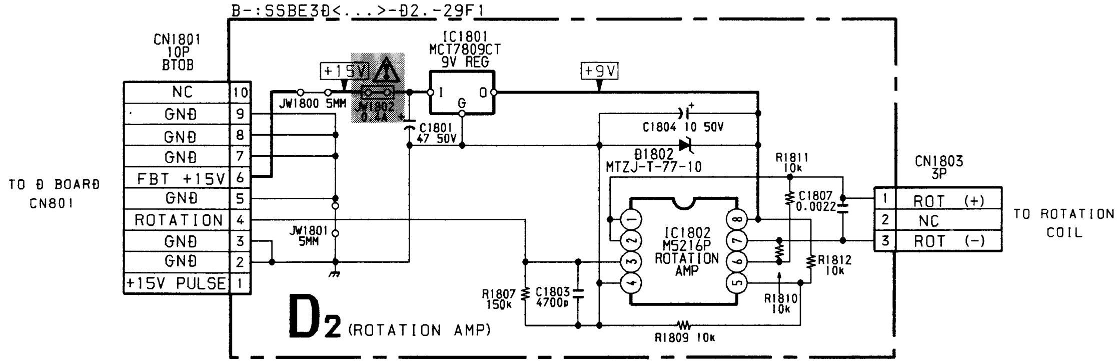
+135V
+9V
CN1015 5P WHT :S-MICRO
+9V
VM
GND
NC
+135V
TO D BOARD CN1401
L1703 10µH
C1726 220 16V
C1701 100 16V
L1705 56µH
L1701 10µH
C1723 0.0047 500V
R1729 470
C1725 22 25V
R1730 2.7k
Q1708 2SC1740S AMP
Q1709 2SC1740S AMP
L1704 56µH
R1728 470
R1731 330
L1702 3.3µH
R1722 47
C1710 0.001
C1702 22 25V
R1701 1k
Q1701 2SC1740S AMP
Q1702 2SC1740S AMP
R1708 390
R1703 2.2k
R1702 1k
R1705 220
R1724 39
R1706 220
C1703 100 16V
R1704 680
D1701 1SS133T
R1725 120 2W
Q1704 2SC1740S BUFF
R1714 560
R1713 1.8
R1712 39 1/2W
C1704 0.47 100V
C1705 33 160V
Q1703 2SA1837 AMP
R1715 18k
C1707 0.047 100V
C1708 0.001 50V
D1702 MTZJ-T-77-39
R1716 1k
C1706 0.1 200V
C1721 0.047 100V
C1709 0.001 50V
C1720 2.2 160V
R1717 180 3W
R1718 18k
D1703 MTZJ-T-77-39
Q1706 2SC4793 AMP
R1719 1.8
R1721 560
R1720 39
C1722 220 16V
JW1701 5.0MM
1 2 3 4 5 6 7 8
VM (VM AMP)

WAVEFORMS C BOARD




CN701
6P
1 G2
2 +200V
3 GND
4 NC/H2
5 H1
6 H2
TO D BOARD CN804
CN702
1P
1 GND
TAB CONNECTOR
TO CRT COATING EARTH
KG KB G2
H
V901
M68LCT60X
PICTURE TUBE
CV KR G1 G4 HV
TO D BOARD T803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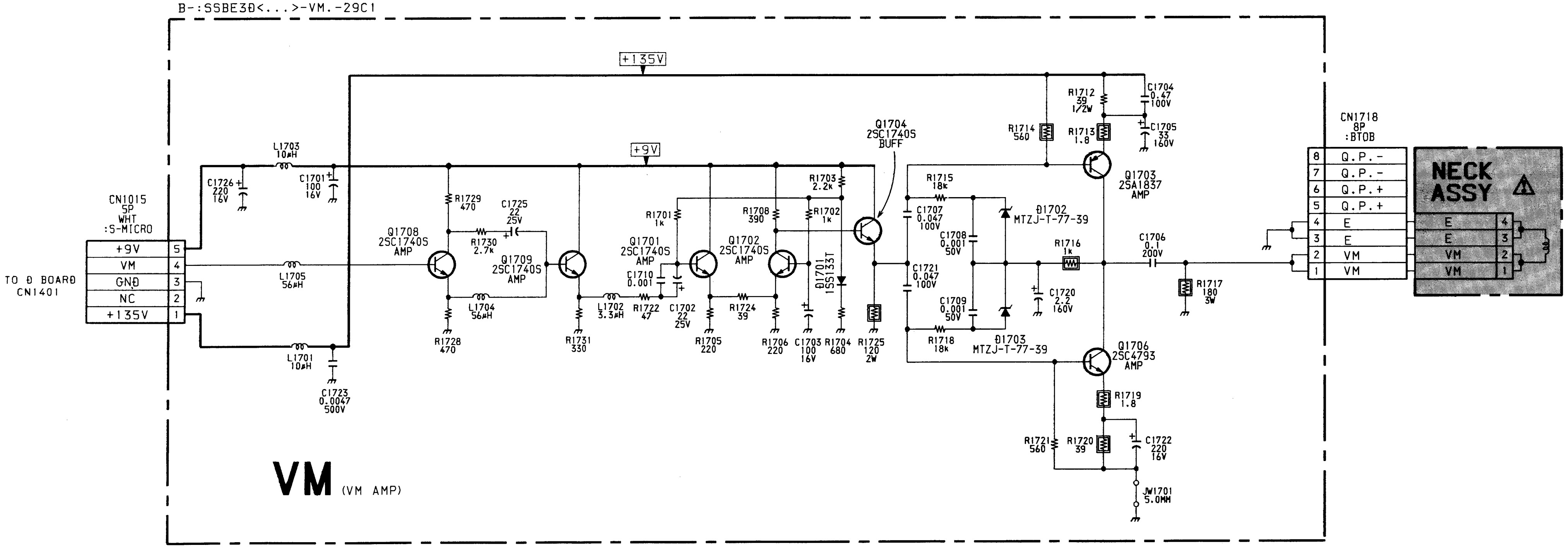
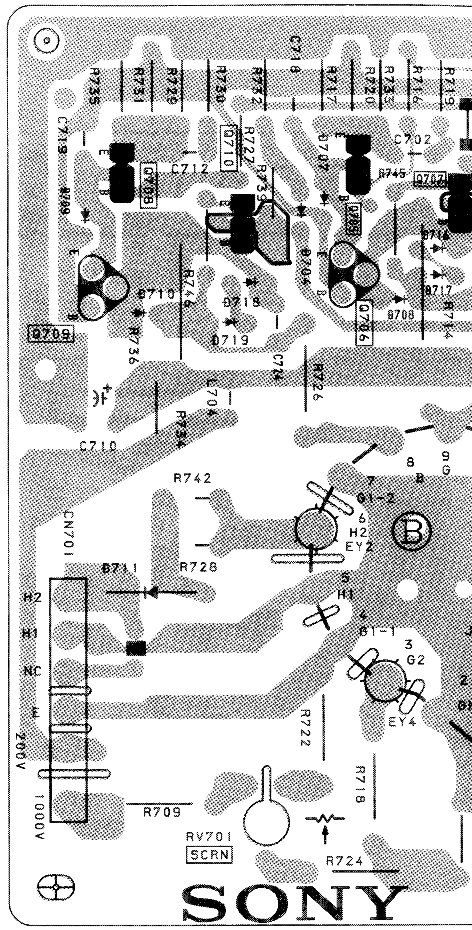
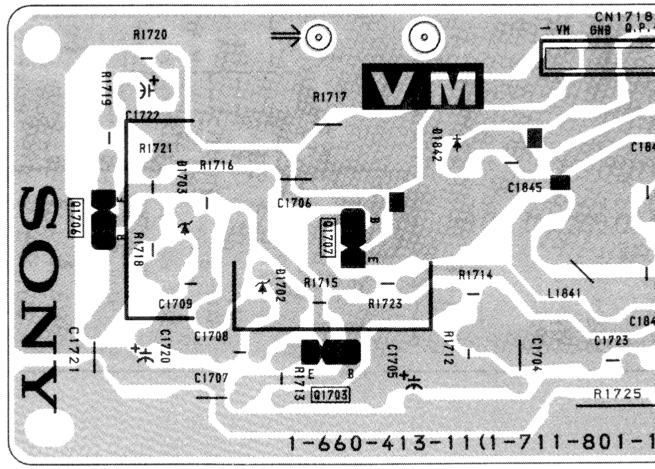
CN1801
10P
BTOB
NC 10
GND 9
GND 8
GND 7
FBT +15V 6
GND 5
ROTATION 4
GND 3
GND 2
+15V PULSE 1
TO D BOARD CN801
+15V
JW1800 5MM
JW1802 0.4A
IC1801
MCT7809CT
9V REG
I O G
+9V
C1801 47 50V
C1804 10 50V
D1802
MTZJ-T-77-10
JW1801 5MM
IC1802
M5216P
ROTATION AMP
R1811 10k
C1807 0.0022
R1812 10k
R1810 10k
R1807 150k
C1803 4700p
R1809 10k
CN1803
3P
1 ROT (+)
2 NC
3 ROT (-)
TO ROTATION COIL
D2 (ROTATION AMP)


B-:SSBE3D<...>-VM.-29C1
+135V
+9V
CN1015
5P
WHT
:S-MICRO
+9V 5
VM 4
GND 3
NC 2
+135V 1
TO D BOARD CN1401
L1703 10μH
C1726 220 16V
C1701 100 16V
L1705 56μH
L1701 10μH
C1723 0.0047 500V
Q1708 2SC1740S AMP
R1729 470
R1728 470
R1730 2.7k
C1725 22 25V
Q1709 2SC1740S AMP
L1704 56μH
R1731 330
L1702 3.3μH
R1722 47
C1710 0.001
C1702 22 25V
R1701 1k
Q1701 2SC1740S AMP
R1705 220
R1708 390
Q1702 2SC1740S AMP
R1724 39
R1706 220
C1703 100 16V
R1704 680
R1703 2.2k
R1702 1k
D1701 1SS133T
Q1704 2SC1740S BUFF
R1725 120 2W
R1715 18k
C1707 0.047 100V
C1708 0.001 50V
C1721 0.047 100V
C1709 0.001 50V
R1718 18k
D1702 MTZJ-T-77-39
D1703 MTZJ-T-77-39
R1716 1k
C1720 2.2 160V
R1714 560
R1712 39 1/2W
R1713 1.8
C1704 0.47 100V
C1705 33 160V
Q1703 2SA1837 AMP
C1706 0.1 200V
R1717 180 3W
Q1706 2SC4793 AMP
R1719 1.8
R1721 560
R1720 39
C1722 220 16V
JW1701 5.0MM
CN1718
8P
:BTOB
8 Q.P.-
7 Q.P.-
6 Q.P.+
5 Q.P.+
4 E
3 E
2 VM
1 VM
NECK ASSY
E 4
E 3
VM 2
VM 1
VM (VM AMP)

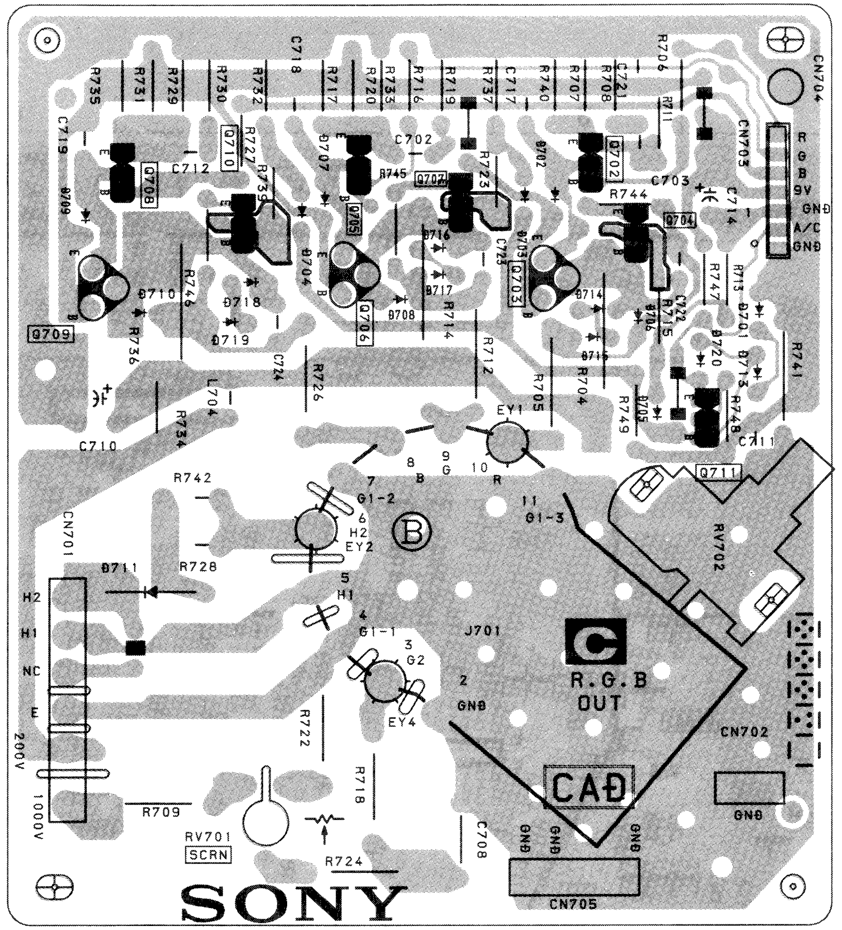
C Board


C718
R735
R731
R729
R730
R732
R717
R720
R733
R716
R719
C719
C712
Q710
R727
R739
D707
C702
R745
Q702
Q708
D709
Q705
D716
D710
D718
R746
D704
D717
D719
D708
Q706
R714
Q709
R736
C724
R726
L704
R734
C710
R742
G1-2
H2
EY2
B
CN701
D711
R728
H1
H2
H1
NC
E
G1-1
G2
EY4
R722
200V
1000V
R718
R709
RV701
SCRN
R724
SONY

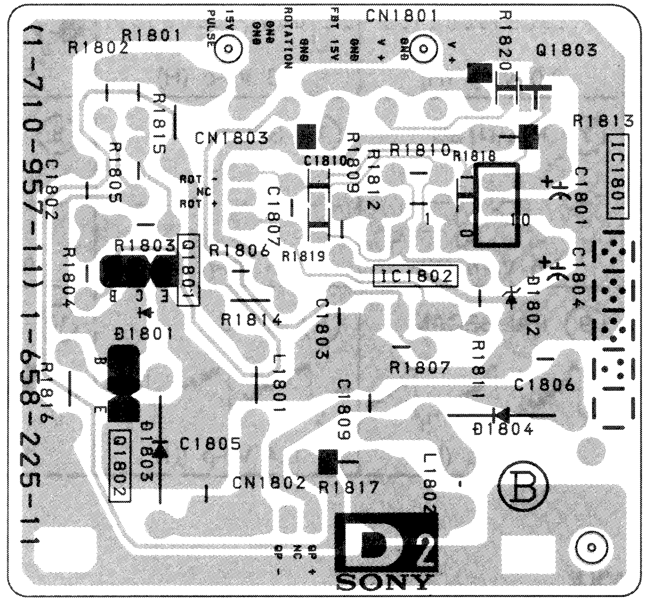
VM Board


CN1718
VM
GND
Q.P.
R1720
R1719
C1722
R1717
VM
R1721
R1716
D1842
C1845
Q1706
D1703
R1718
C1706
Q1702
D1702
R1715
R1714
R1723
L1841
C1709
C1708
C1720
C1721
C1707
R1713
Q1703
C1705
R1712
C1704
C1723
R1725
SONY
1-660-413-11(1-711-801-1

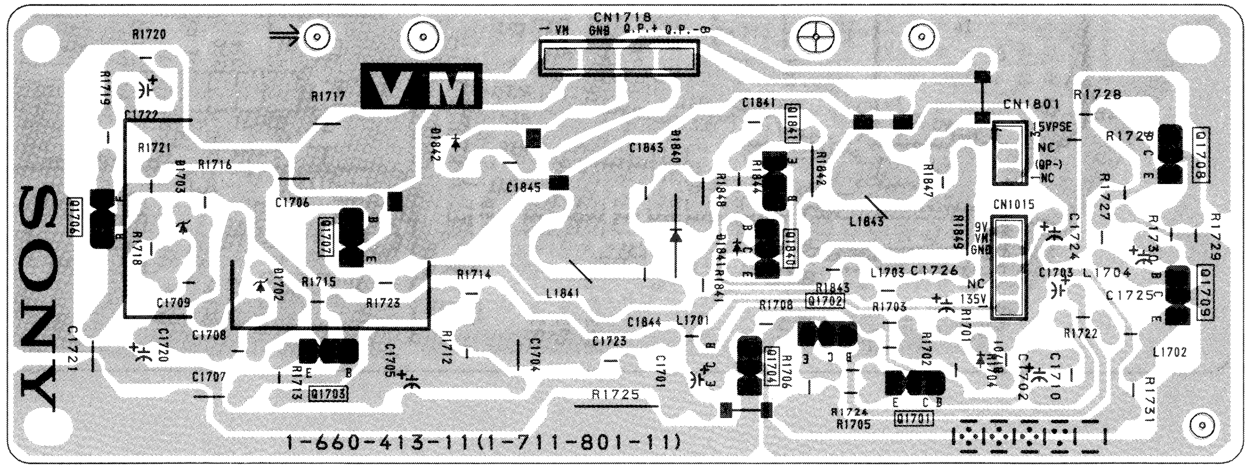
C Board


CN704
CN703
R
G
B
9V
GND
A/C
GND
Q702
Q703
Q704
Q705
Q706
Q707
Q708
Q709
Q710
Q711
C702
C703
C710
C711
C712
C714
C717
C718
C719
C721
C722
C723
C724
R704
R705
R706
R707
R708
R709
R711
R712
R713
R714
R715
R716
R717
R718
R719
R720
R722
R723
R724
R726
R727
R728
R729
R730
R731
R732
R733
R734
R735
R736
R737
R739
R740
R741
R742
R744
R745
R746
R747
R748
R749
L704
EY1
EY2
EY4
G1-2
G1-1
G1-3
G2
H1
H2
J701
CN701
H2
H1
NC
E
200V
1000V
RV701
SCRN
RV702
CN702
CN705
GND
C708
C
R.G.B
OUT
CAD
SONY

D2 Board


(1-710-957-11) 1-658-225-11
CN1801
15V
PULSE
GND
GND
ROTATION
FBT 15V
GND
GND
V+
V-
CN1802
CN1803
ROT+
NC
ROT-
R1801
R1802
R1803
R1804
R1805
R1806
R1807
R1809
R1810
R1811
R1812
R1813
R1814
R1815
R1816
R1817
R1818
R1819
R1820
C1801
C1802
C1803
C1804
C1805
C1806
C1807
C1809
C1810
D1801
D1802
D1803
D1804
Q1801
Q1802
Q1803
IC1801
IC1802
L1801
L1802
D2
SONY

VM Board


VM
CN1718
-VM
GND
Q.P.+
Q.P.-
CN1801
15VPSE
NC
(QP-)
NC
CN1015
9V
VM
GND
NC
135V
Q1701
Q1702
Q1703
Q1704
Q1706
Q1707
Q1708
Q1709
Q1840
D1702
D1703
D1840
D1841
D1842
C1701
C1703
C1704
C1705
C1706
C1707
C1708
C1709
C1710
C1720
C1721
C1722
C1723
C1724
C1725
C1726
C1841
C1843
C1844
C1845
R1701
R1702
R1704
R1705
R1706
R1708
R1712
R1713
R1714
R1715
R1716
R1717
R1718
R1719
R1720
R1721
R1722
R1723
R1724
R1725
R1726
R1727
R1728
R1729
R1730
R1731
R1842
R1843
R1844
R1847
R1848
R1849
L1701
L1702
L1703
L1704
L1841
L1843
SONY
1-660-413-11(1-711-801-11)

C BOARD
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q702	2.0	11.4	1.4
Q703	12.0	168.3	11.4
Q704	168.3	6.0	163.5
Q705	1.7	11.4	1.2
Q706	12.0	178.8	11.4
Q707	178.2	6.2	173.8
Q708	2.0	11.4	1.4
Q709	12.0	168.3	11.4
Q710	168.0	6.4	160.0

VM BOARD
TRANSISTOR VOLTAGE TABLE

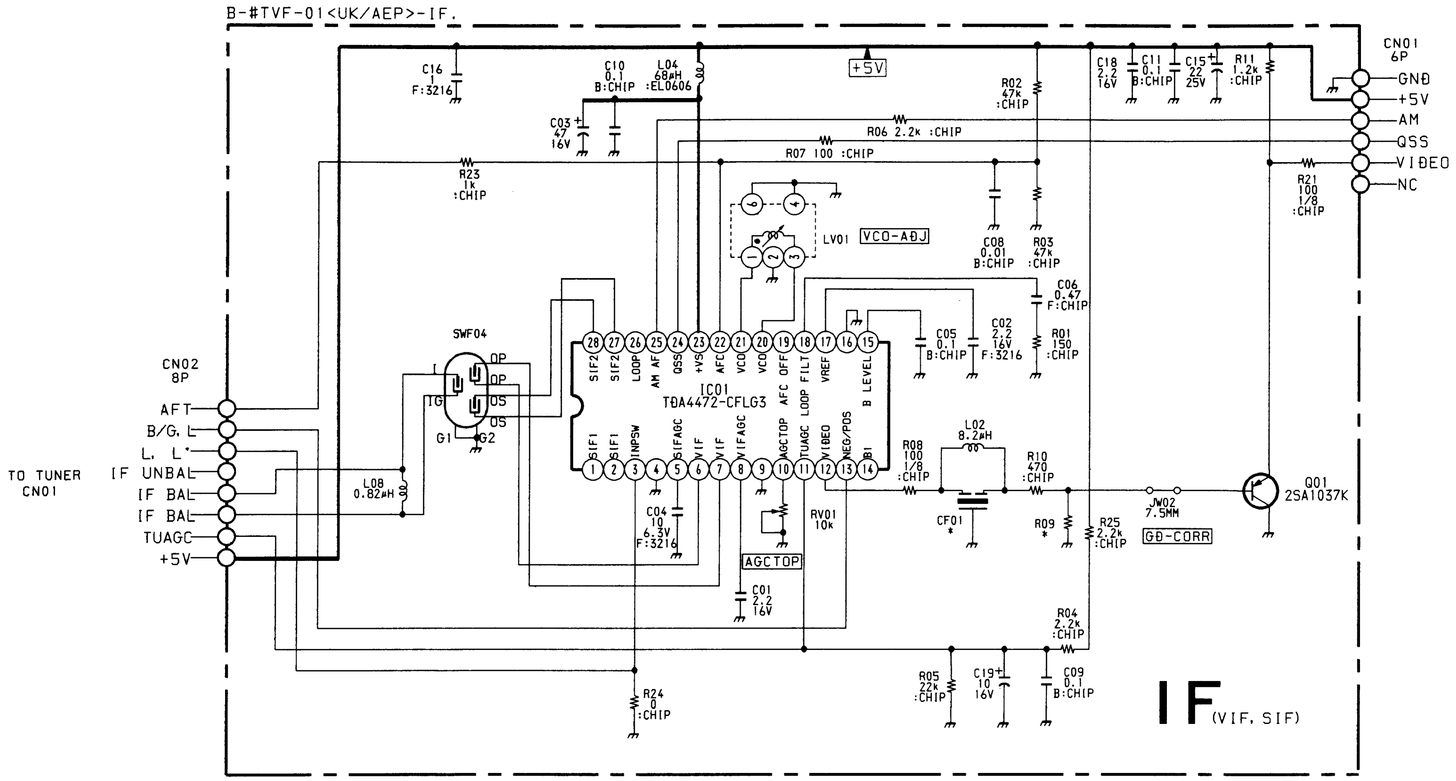
Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q1701	2.5	8.8	1.8
Q1702	2.5	5.5	1.8
Q1703	134.3	71.8	134.8
Q1704	5.5	8.8	4.8
Q1706	1.0	71.8	0.4
Q1707	0.7	-	-
Q1708	2.9	6.6	2.2
Q1709	2.2	8.8	1.5
Q1840	0.6	-	-

D2 BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC1802	1-2	2.8
	3	3.0
	5-6	4.4
	7	6.2
	8	9.0

TUVIF (AEP) (KV-29X1A, 29X1D, 29X1E, 29X1K, 29X1L and 29X1R ONLY)

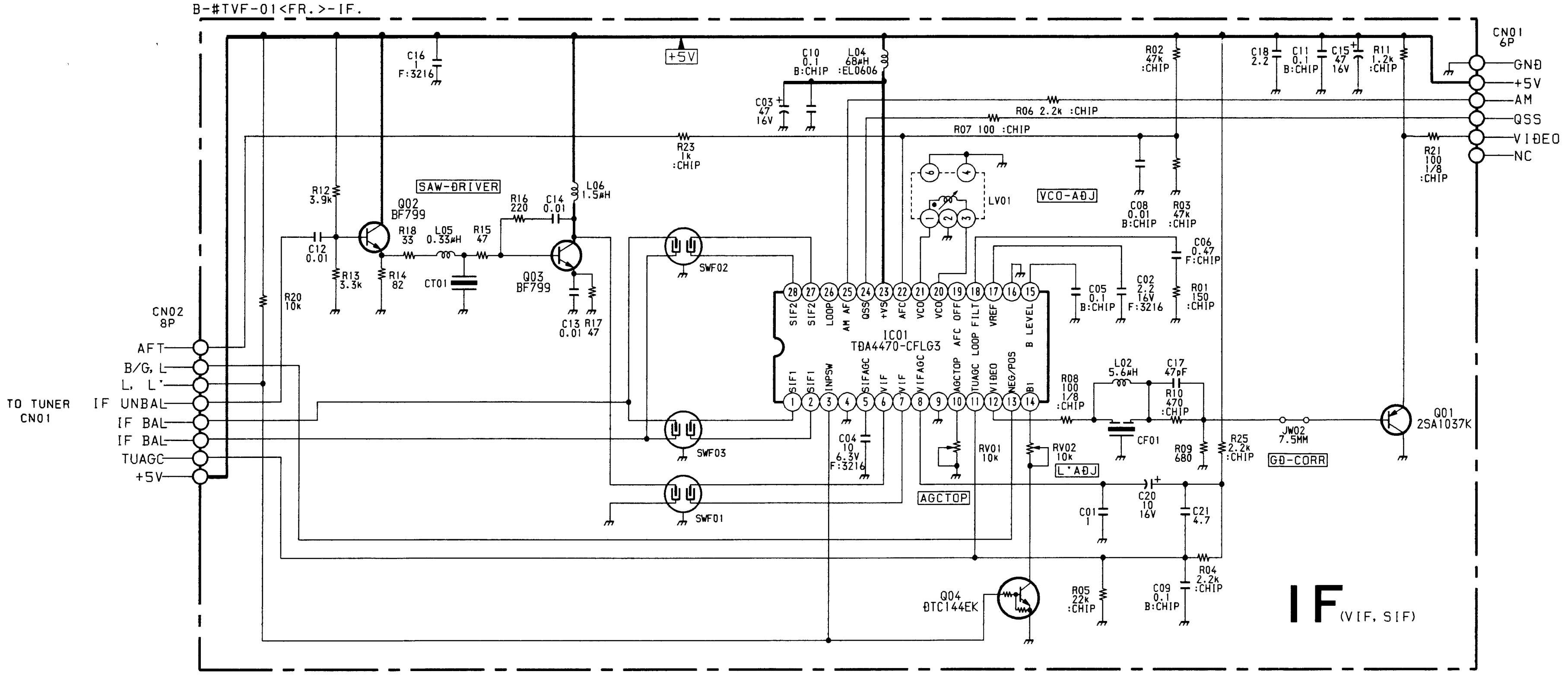
TUVIF (UK) (KV-29X1U ONLY)


B-#TVF-01<UK/AEP>-IF.
CN01 6P
GND
+5V
AM
QSS
VIDEO
NC
CN02 8P
AFT
B/G, L
L, L'
IF UNBAL
IF BAL
IF BAL
TUAGC
+5V
TO TUNER CN01
+5V
IC01 TDA4472-CFLG3
SWF04
LV01
VCO-ADJ
AGCTOP
GD-CORR
Q01 2SA1037K
L08 0.82µH
L04 68µH :EL0606
L02 8.2µH
CF01
JW02 7.5MM
RV01 10k
R24 0 :CHIP
IF (VIF, SIF)

IF Board

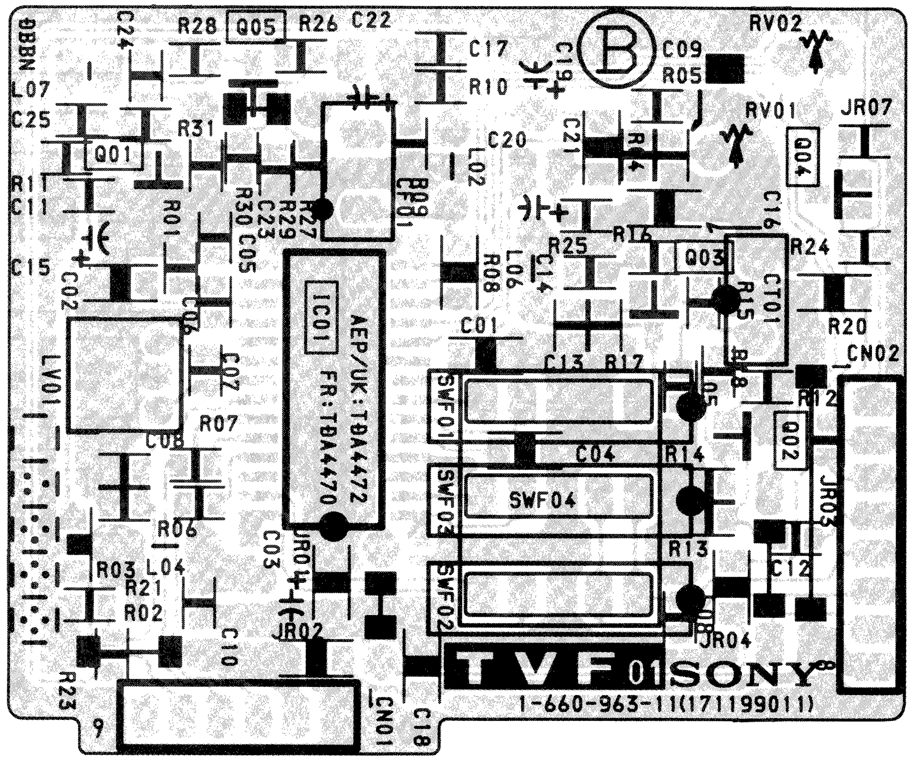
Model Ref. No.	29X1A	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
CF01	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz
R09	680MF	680MF	680MF	680MF	680MF	680MF	1K

TUVIF (FR) (KV-29X1B ONLY)

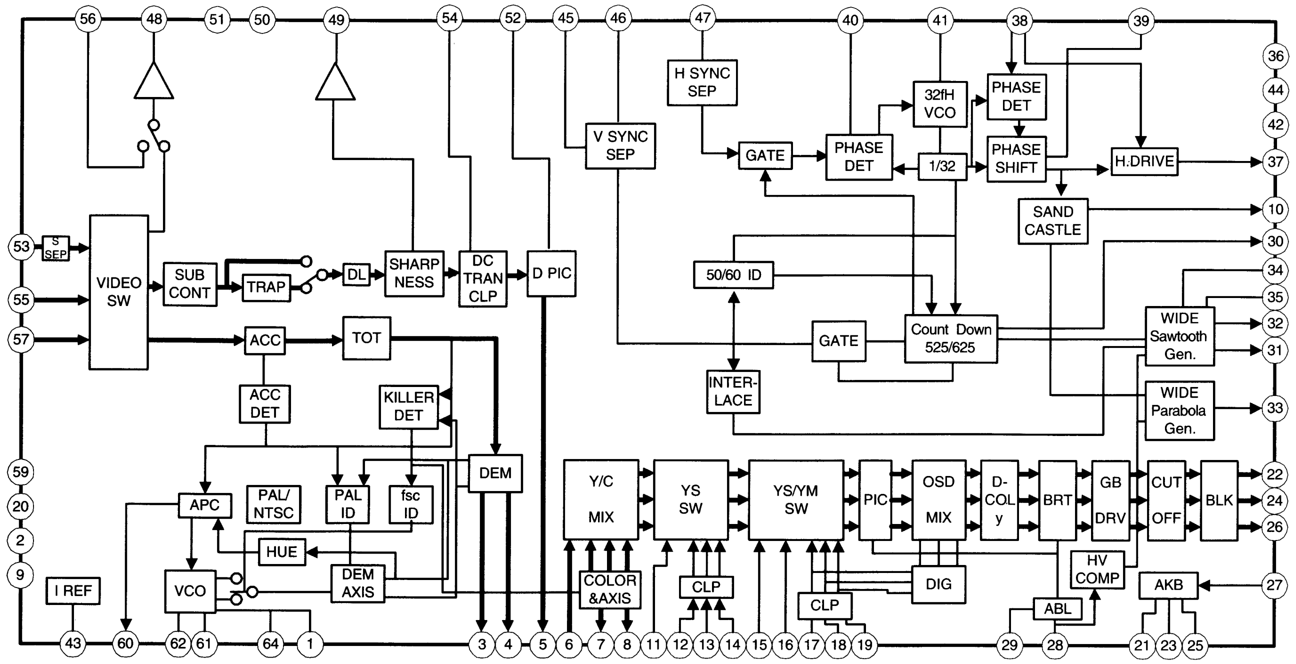

B-#TVF-01<FR.>-IF.
CN01 6P
GND
+5V
AM
QSS
VIDEO
NC
CN02 8P
AFT
B/G, L
L, L'
IF UNBAL
IF BAL
IF BAL
TUAGC
+5V
TO TUNER CN01
+5V
SAW-DRIVER
Q02 BF799
Q03 BF799
L05 0.33µH
L06 1.5µH
CT01
SWF01
SWF02
SWF03
IC01 TDA4470-CFLG3
LV01
VCO-ADJ
AGCTOP
L'ADJ
GD-CORR
RV01 10k
RV02 10k
L02 5.6µH
C17 47pF
CF01
JW02 7.5MM
Q01 2SA1037K
Q04 DTC144EK
IF (VIF, SIF)

IF [VIF, SIF]

IF Board

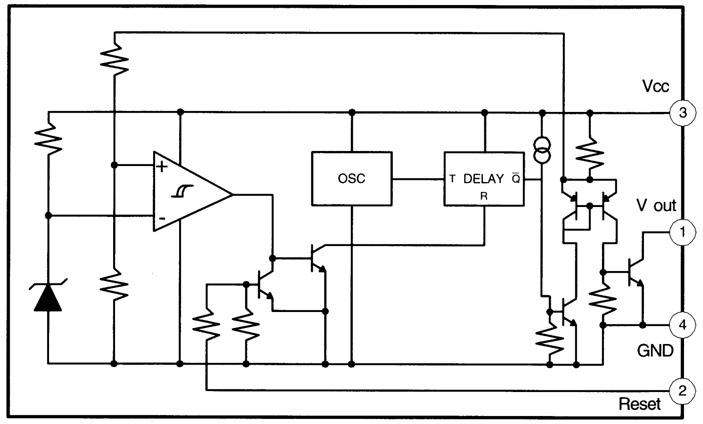

IC01
AEP/UK:TDA4472
FR:TDA4470
LV01
SWF01
SWF02
SWF03
SWF04
CF01
CT01
Q01
Q02
Q03
Q04
Q05
RV01
RV02
CN01
CN02
TVF 01 SONY
1-660-963-11(17119901 1)

A BOARD IC301 CXA2000Q-TL



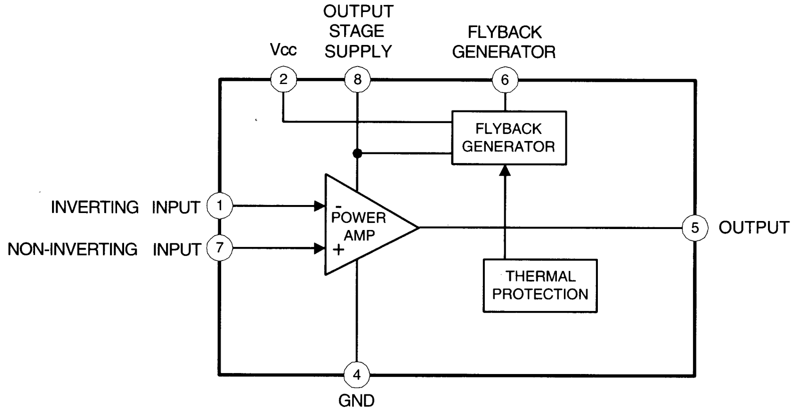
S SEP
VIDEO SW
SUB CONT
TRAP
DL
SHARP NESS
DC TRAN CLP
D PIC
H SYNC SEP
V SYNC SEP
GATE
PHASE DET
32fH VCO
1/32
PHASE DET
PHASE SHIFT
H.DRIVE
SAND CASTLE
50/60 ID
GATE
Count Down 525/625
WIDE Sawtooth Gen.
WIDE Parabola Gen.
INTER-LACE
ACC
TOT
ACC DET
KILLER DET
DEM
APC
PAL/ NTSC
PAL ID
fsc ID
HUE
VCO
DEM AXIS
I REF
COLOR &AXIS
Y/C MIX
YS SW
YS/YM SW
PIC
OSD MIX
D-COL y
BRT
GB DRV
CUT OFF
BLK
DIG
CLP
CLP
HV COMP
ABL
AKB

A BOARD IC4 PST593C



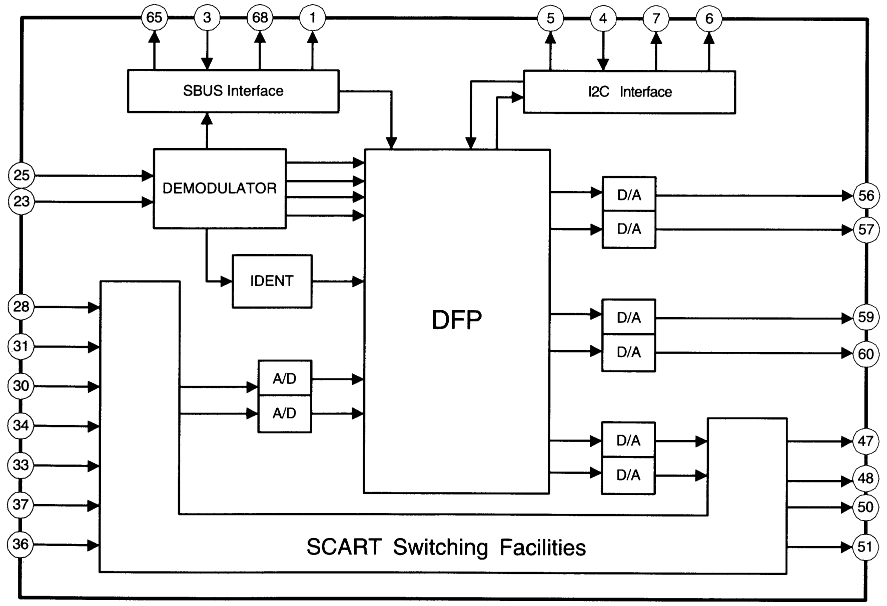
OSC
T DELAY Q̄
R
Vcc
V out
GND
Reset

D BOARD IC500 STV9379



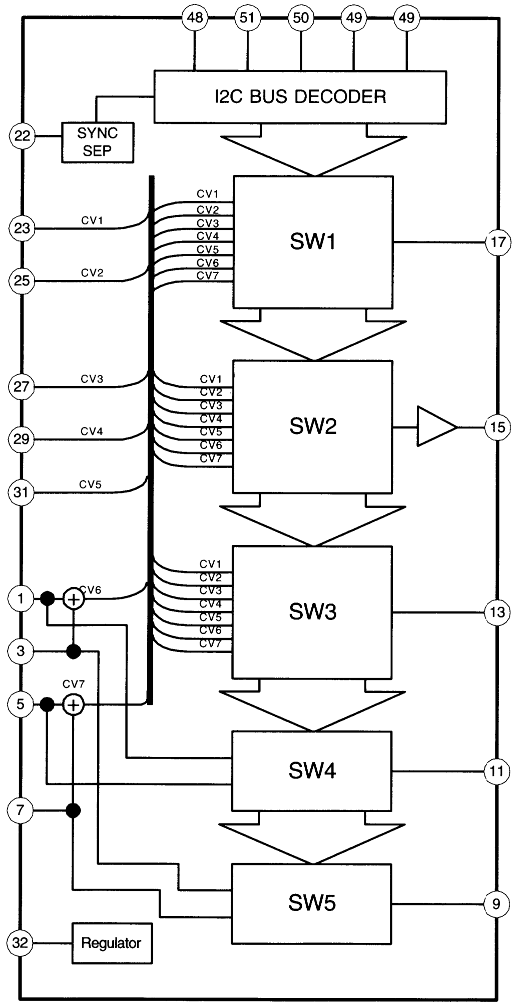
Vcc
OUTPUT STAGE SUPPLY
FLYBACK GENERATOR
FLYBACK GENERATOR
INVERTING INPUT
NON-INVERTING INPUT
POWER AMP
OUTPUT
THERMAL PROTECTION
GND

A BOARD IC202 MSP3410/MSP3400



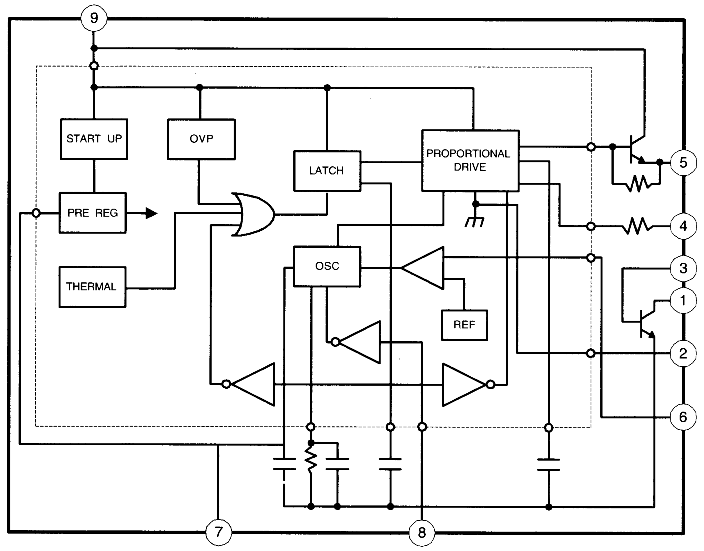
SBUS Interface
I2C Interface
DEMODULATOR
IDENT
DFP
A/D
A/D
D/A
D/A
D/A
D/A
D/A
D/A
SCART Switching Facilities

A BOARD IC201 CXA2040Q



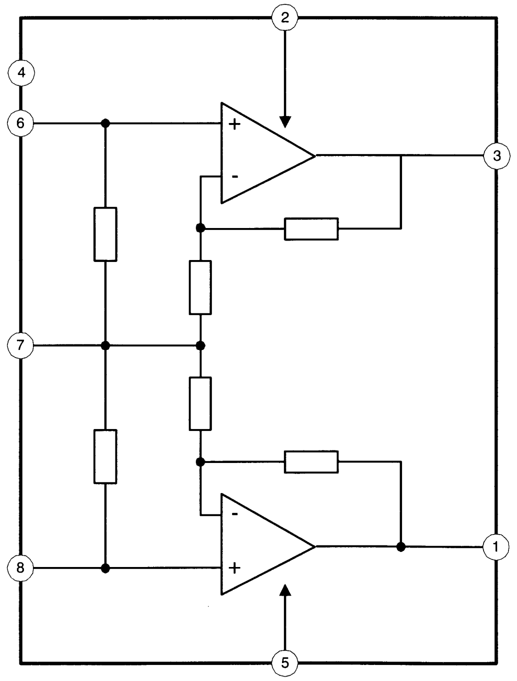
I2C BUS DECODER
SYNC SEP
SW1
SW2
SW3
SW4
SW5
CV1
CV2
CV3
CV4
CV5
CV6
CV7
Regulator

D BOARD IC600 STR-S6708



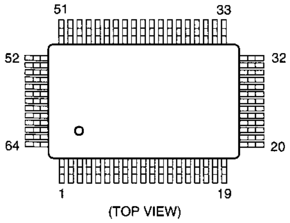
START UP
OVP
PRE REG
THERMAL
LATCH
PROPORTIONAL DRIVE
OSC
REF

D BOARD IC1200 TDA7264

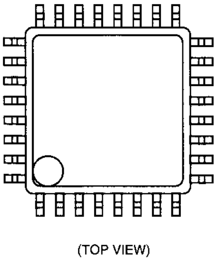


5-4. SEMICONDUCTORS

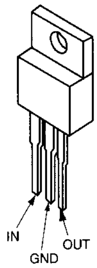
CXA2000Q-TL


51
33
52
32
64
20
1
19
(TOP VIEW)

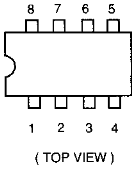
CXA2040Q-T4



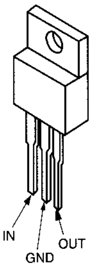
L4941BV



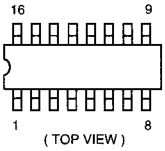
LM393P
M5216P
TDA2822M
μPC393C


8 7 6 5
1 2 3 4
(TOP VIEW)

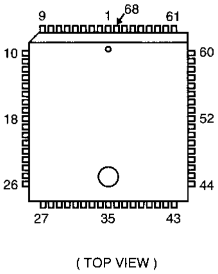
LM2940CT-5.0
LM2940CT
LM2940T-9.0
MCT7809CT
μPC2405HF



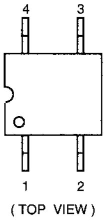
MC14052BDR2


16
9
1
8
(TOP VIEW)

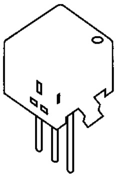
MSP3400C-PS
MSP3410-15


9
1
68
61
10
60
18
52
26
44
27
35
43
(TOP VIEW)

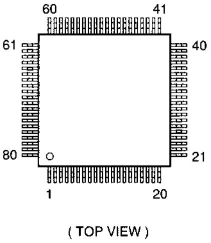
PST593C-MMP-4P


4
3
1
2
(TOP VIEW)

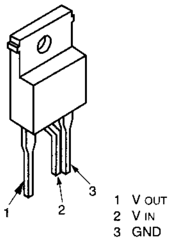
SBX1790-51



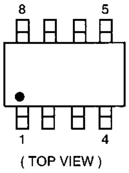
SDA5250M-GEG


60
41
61
40
80
21
1
20
(TOP VIEW)

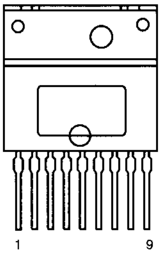
SE135N


1
2
3
1 V OUT
2 V IN
3 GND

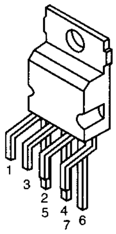
ST24E32M6TR


8
5
1
4
(TOP VIEW)

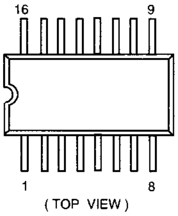
STR-S6708



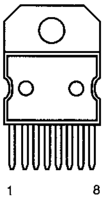
STV9379



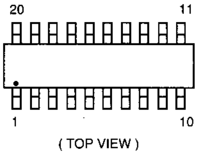
TDA4665T-T


16
9
1
8
(TOP VIEW)

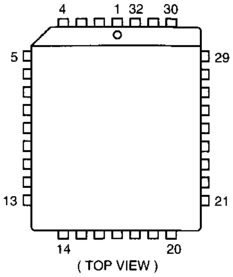
TDA7264



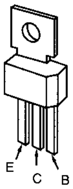
TDA8395T


20
11
1
10
(TOP VIEW)

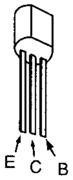
TMS27PC010A-15FML


4
1
32
30
5
29
13
21
14
20
(TOP VIEW)

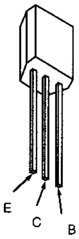
BF871-127



BF421L-AMMO
JA101TP-Q
2SA733-K
2SA933AS
2SA933S
2SA1091-O
2SC3502-F
2SC2808STP-R



DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SC1740S-RT



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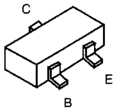

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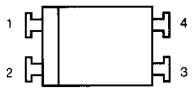

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EG-1Z-V1
EGP20G
EL1Z
EM1-V1
EU-1-V1
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GP08D
RGP02
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RU3YX
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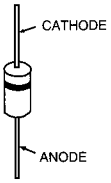
RU4DS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MTZJ-5.1B
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MTZJ-6.8B
MTZJ-7.5C
MTZJ-9.1
MTZJ-T-77-9.1A
MTZJ-10
MTZJ-39
RD3.9ESB2
RD5.1ESB2
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RD6.2ESB2
RD6.8ESB2
RD7.5ESB2
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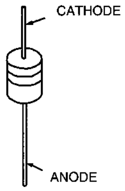
RD39ES-B2
1SS133T-77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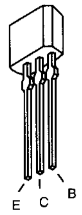

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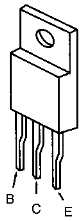

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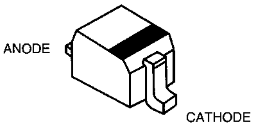
UDZ-TE-17-5.6B
UDZ-TE-17-9.1B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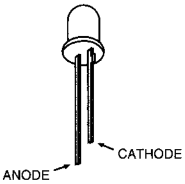
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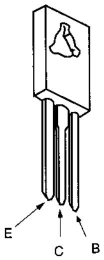

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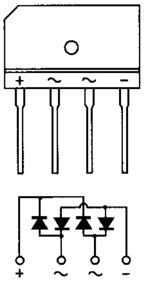

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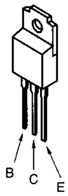

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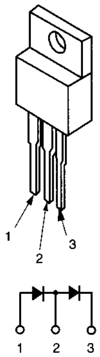

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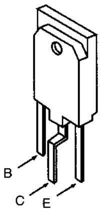
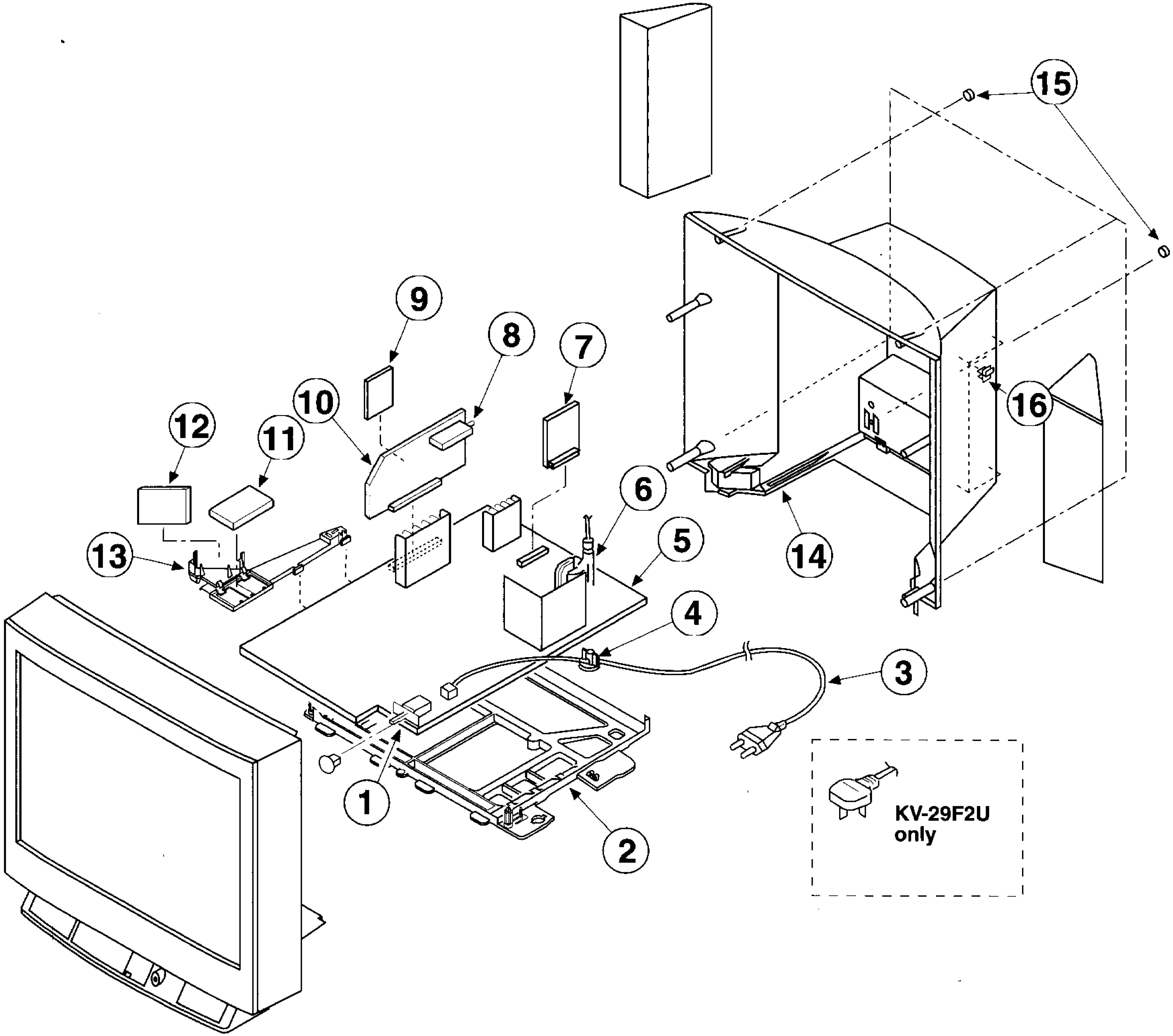


6-1. CHASSIS


15
9
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16
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14
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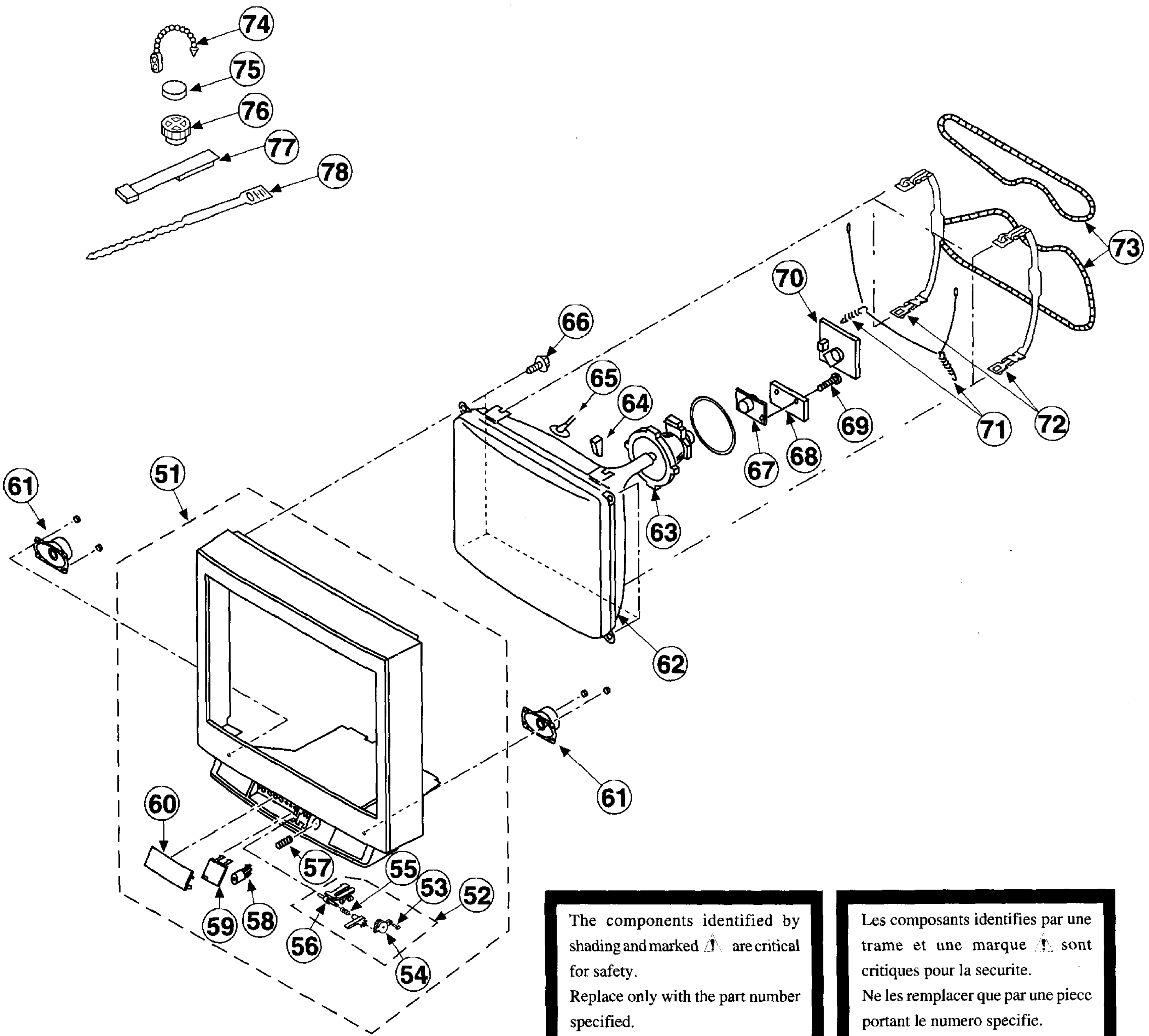
2
KV-29F2U only

6-2. PICTURE TUBE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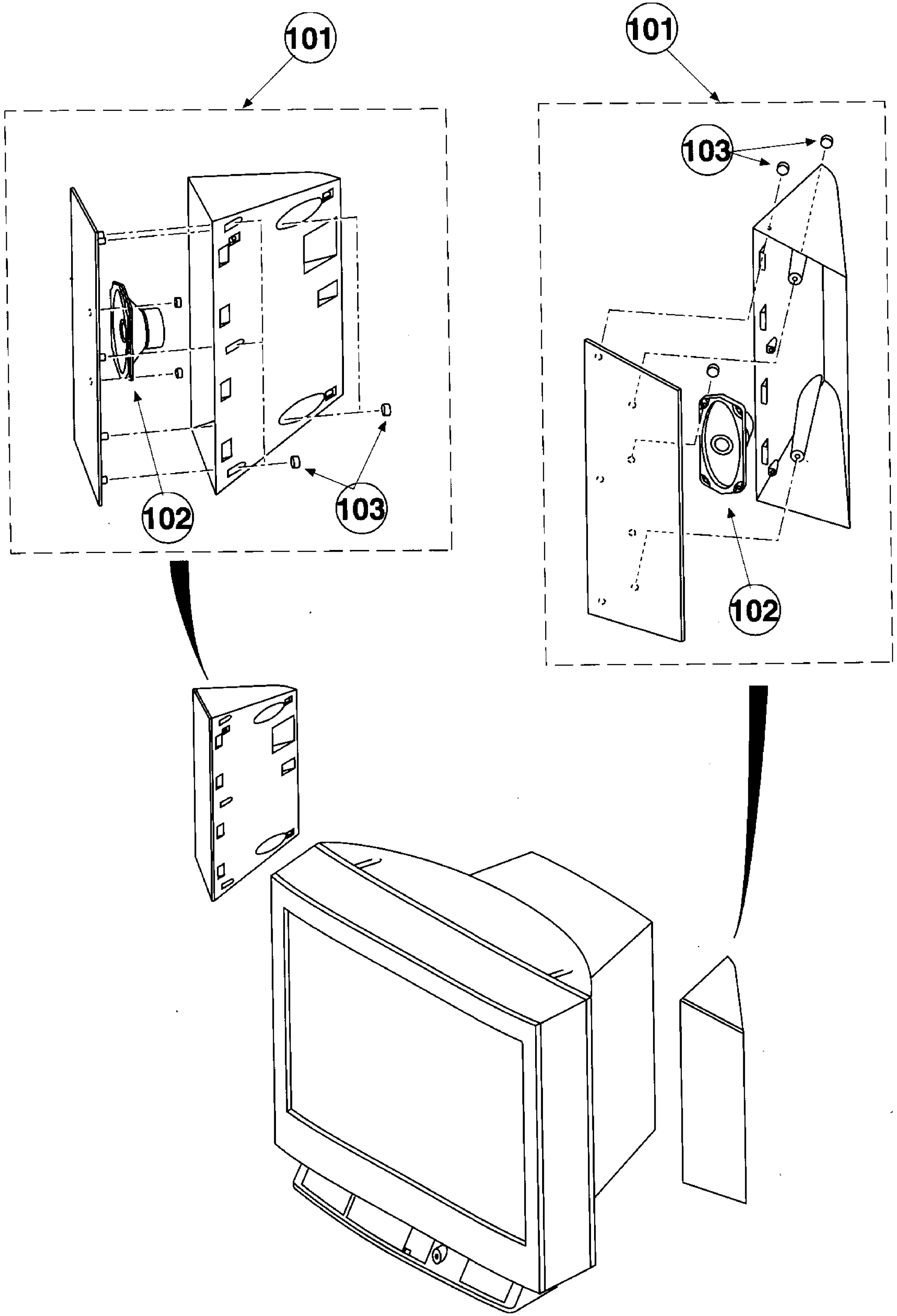
54

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-3. BOX SPEAKER


101
101
103
102
103
102